

**VOCABULARY LEARNING STRATEGIES: AN EMPIRICAL
STUDY OF THEIR USE AND EVALUATION BY SAUDI EFL
LEARNERS MAJORING IN ENGLISH**

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Abstract

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Vocabulary Learning Strategies: An Empirical Study of Their Use and Evaluation by Saudi
EFL Learners Majoring in English

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This study examined the use and evaluation of vocabulary learning strategies (VLSs) by Saudi EFL (as opposed to ESL) learners majoring in English in Qassim Imam University, Saudi Arabia. Three research methods were used to achieve the aims of the study. First, a questionnaire survey was used with questions about a set of VLSs based on a taxonomy devised by the experimenter. The taxonomy is based on previous research on LLSs and VLSs in general and the taxonomies devised by Schmitt (1997) and Nation (2001) in particular. The questionnaire was divided into three sections: 1) metacognitive strategies, 2) discovery strategies, and 3) consolidation strategies. The questionnaire respondents were asked to report their use of each strategy according to a five-point frequency scale. Similarly, they were asked to evaluate each strategy according to a five-point evaluation scale. The second method was a tape-recorded think-aloud-protocol experiment. In this experiment, the participants were asked to read five texts, verbalising their comprehension of the texts and their way of dealing with unknown words. The third method was individual interviews conducted afterwards in order to probe some aspects of the subjects' use and evaluation of VLSs in greater detail.

The analysis of the questionnaire data showed that Saudi English majors tend to use both the general and the more specific VLSs quite infrequently. They also seemed to rely heavily on course demand. In addition, their strategy use was generally not directed towards the type of strategies that require elaboration, active mental processing or dedication. It also emerged that the subjects are unaware of several strategies. The analysis of the subjects' TAPs revealed some striking findings. The TAPs of a considerable number of subjects made apparent a number of areas of weakness in terms of both use of word-solving strategies, and L2 vocabulary proficiency level. Overall, the subjects proved themselves to be in great need of a prolonged programme of courses designed to develop their L2 vocabulary, promote their awareness of the nature of L2 vocabulary learning, and train them in effective use of a wide range of VLSs. These subjects are more likely to benefit from a strategy training programme because they present a type of course-dependent learners, and because their evaluation of the usefulness of strategies was significantly high.

The thesis comprises seven chapters. Chapter One is an introduction of the thesis. It highlights the background, motivation and aims of the study as well as the layout of the thesis. Relevant issues in previous research on LLSs, VLSs and L2 vocabulary learning are discussed in Chapter Two before the taxonomy of the current study is introduced towards the end of the chapter. Chapter Three discusses in detail the methods used for collecting the data. The analyses of the data are presented in the following two chapters. The questionnaire data is analysed in Chapter Four, whereas the TAPs data is analysed in Chapter Five. The major findings of the questionnaire data and TAPs data are exploited in Chapter Six, where a number of pedagogical implications and recommendations for strategy training are suggested. Chapter Seven concludes the thesis with a presentation of a summary of the chapters, an indication of the limitations of the study, and suggestions for a number of topics believed to merit further research.

Statement of Declaration

‘I hereby declare that this thesis is my own work and that no material in this thesis has been previously presented for a degree in this university or any other university.’

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Dedication

TO MY BELOVED MOTHER NORAH AL-RAOOJI;
AND TO MY BELOVED FATHER RASHID AL-FUHAID
WHO DIED SHORTLY BEFORE I SUBMITTED THIS THESIS.

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List of abbreviations

EFL:	English as a foreign language
ESL :	English as a second language
FL :	Foreign language
L1:	first language (mother tongue)
L2:	second language (another language)
LLSs:	language learning strategies
MWUs:	Multi-word units
SL:	Second language
SLA:	Second language acquisition
TAP:	think-aloud protocol
TAPs:	think-aloud protocols
VLSS:	vocabulary learning strategies
WSSs:	Word-solving strategies

CHAPTER ONE

INTRODUCTION

1.1 Background to the study

The development of an effective command of L2 vocabulary is an ongoing requirement for learning another language, throughout all levels of proficiency. This is because:

...words are the basic building blocks of language, the units of meaning from which larger structures such as sentences, paragraphs and whole texts are formed. For native speakers, although the most rapid growth occurs in childhood, vocabulary knowledge continues to develop naturally in adult life in response to new experiences, inventions, concepts, social trends and opportunities for learning. For learners, on the other hand, acquisition of vocabulary is typically a more conscious and demanding process. Even at an advanced level, learners are aware of limitations in their knowledge of second language (or L2) words. They experience lexical gaps, that is words they read which they simply do not understand, or concepts that they cannot express as adequately as they could in their first language (or L1). Many learners see second language acquisition as essentially a matter of learning vocabulary... (Read, 2000:1).

Jones (1995:95) says of his self-study experience of Hungarian:

From this learner's experience, it is suggested that building a working lexicon is the single most important task facing the learner. In this there appear to be two key enabling aims: gaining a large enough stock of core lexemes to use etymological strategies

on complex vocabulary, and developing the ability to read real texts. Reaching these thresholds is likely to be a hard task; beyond them learning may well become more enjoyable. A combination of studial and output-practice strategies is seen as crucial at all proficiency levels, however.

He adds (*ibid*: 108):

Learning a language with a completely alien lexicon is a reality for most of the world's language learners. In addition, most of them will be learning this language outside the country of use and with little native-speaker contact; many will be using less than ideal materials and methods; and a sizable proportion may well be using self-study techniques, either instead of or in addition to class tuition.

L2 learners often relate their difficulty in both receptive and productive aspects of language use to having an inadequate vocabulary (Politzer, 1978; Levenston, 1979; both cited in Oxford and Scarcella, 1994; Yorio, 1971; cited in Chern, 1993). Insufficient vocabulary knowledge is found to be the largest reading comprehension problem for L2 learners (Huckin and Bloch, 1993). In fact, a L2 learner's need to learn grammatical structures declines as his/her proficiency level increases, whereas the need to comprehend and learn new words continues throughout the learner's proficiency levels.

Anderson and Freebody (1981, cited in Luppescu and Day, 1993) reviewed research on vocabulary learning and found that many researchers consider vocabulary knowledge a strong indicator of general language ability. Astika (1993; cited in Nation, 2001) found that the vocabulary section accounted for the largest amount of variance among learners. Leki and Carson (1994; cited in Nation, 2001) found that

limited vocabulary was seen by L2 learners as the main factor affecting the quality of their writing. Nation (2001), citing Harley and King (1989) and Linnarud (1986), observes that comparisons between native speakers' and L2 learners' writing indicate that native speakers use a much larger range of vocabulary. Despite this, L2 vocabulary learning has not been given its due importance by researchers and teaching methodologists.

The communicative approach to language teaching, which was a reaction to the grammar-translation approach, paid more attention to vocabulary as a consequence of decreasing the teaching load of grammatical rules and promoting natural receptive and productive use of L2. L2 lexis also received more attention in the communicative approach because the latter primarily aims to prepare learners to operate in the unpredictable communicative world outside the classroom (Meara, 1995). Yet the specifics of vocabulary learning did not receive direct attention. Implicit vocabulary learning was seen as more effective compared to the mnemonic techniques (memorising words in lists) which were encouraged in the grammar-translation approach. Therefore, direct vocabulary learning continued to be neglected because it was believed that it can be a by-product of constant exposure to and use of L2 (Marton, 1977). Laufer (1997:140-1) comments on the neglect of lexical learning:

There are several possible causes for this neglect: as vocabulary is less amenable to generalisations than closed systems like grammar or phonology, psycholinguists have reacted against vocabulary since it has been connected with associative learning rather than a learning process of hypothesis formation and testing, and an emphasis on the beginning stages of learning led to a focus on grammar.

In recent years, however, there has been an increasing, focused research into L2 vocabulary learning and vocabulary learning strategies (VLSs, hereafter). This is a natural result of the shift in teaching methodologies from teacher-controlled settings to student-centred learning where the focus is on the actions and decisions taken by the learner (Schmitt, 2000). That is, more attention has been paid to vocabulary due to the increasing interest in autonomous learning which aims to prepare learners for the unpredictable communicative world outside the learning setting. This increasing interest has also been promoted through another new relevant area of interest, namely research into language learning strategies (LLSs, hereafter). The increasing interest in autonomous learning has given rise to research into second LLSs. This can be seen through the work of Naiman *et al.* (1978), O'Malley *et al.* (1985), Rubin (1987), Wenden and Rubin (1987), Chamot (1987), Skehan (1989), O'Malley and Chamot (1990), Oxford (1990), and McDonough (1995). Several of the LLSs discussed by these researchers are vocabulary-specific strategies or can be used to develop L2 vocabulary indirectly. In addition, some researchers (e.g. O'Malley *et al.*, 1985; Chamot, 1987; Naiman *et al.*, 1978) have reported that L2 learners tend to direct some LLSs towards learning and recalling L2 vocabulary. The ample research into LLSs has been accompanied by a steady growth in research into L2 vocabulary learning (e.g. Nation, 1983, 1990, 2001; Carter, 1987, 1998; Carter and McCarthy, 1988; McCarthy, 1990; Huckin, Haynes and Coady, 1993; Hatch and Brown, 1995; Coady and Huckin, 1997; Schmitt and McCarthy, 1997; Schmitt, 2000; Read, 2000; to name but a few). Such research emphasised the role of vocabulary learning in the field of L2 acquisition. However, most of the work in the area of vocabulary has focused on the management of vocabulary learning in terms of reducing vocabulary load, dealing

with certain learning difficulties, teaching specific learners and successful methods for teaching vocabulary (Laufer, 1997).

During the 1970's and 1980's, the idea of implicit acquisition of L2 lexis was widely accepted due to the popularity of the communicative approach, which devalued the mnemonic techniques of the grammar-translation technique (Sökmen, 1997). Encouragement of implicit learning of L2 vocabulary is based on the fact that the acquisition of L1 vocabulary is predominantly implicit (Carter, 1998; Sternberg, 1987; Schmitt 2000). However, though it is true that repeated exposure to the different meanings of a new word in different contexts does help learners to understand and consolidate the new word in their memories, this strategy represents no more than a single approach towards the mastery of L2 lexis. Implicit learning can be considered a final, advanced step towards a practical mastery of L2 vocabulary. Therefore, other strategies need to be employed to achieve optimum acquisition. Explicit vocabulary learning is considered part of metacognitive language learning as it yields itself properly to strategies of planning and setting goals for L2 vocabulary learning.

Implicit vocabulary learning can be considered the ultimate goal towards which all other strategies lead. The aim of explicit learning strategies is to allow learners to reach a level where they can guess new words and use them productively. The need for implicit learning becomes more significant as the learner's proficiency level increases. Accordingly, it can be said that the strategy of guessing new words does not by itself fulfil learners' needs for thorough acquisition of vocabulary items necessary for the beginning, intermediate and advanced stages of learning. Put briefly, learners need a "top-down" process that results in learning, not only a "bottom-up" strategy that leads to problem-solving (Sökmen, 1997).

Nowadays, L2 lexis has started to take an intermediate position between the two schools of thought by mixing explicit with implicit learning. Current theorists generally agree that learners need to master the strategic skills of both explicit and implicit L2 vocabulary learning (Sökmen, 1997). Nation (2001), for example, holds that L2 learners need to learn L2 vocabulary both explicitly and implicitly, but suggests that explicit learning should not occupy more than 25% of a L2 vocabulary teaching and learning programme.

Nation and Waring (1997) suggest that the 3,000 most frequent word families should be regarded as a priority target for L2 learners, as a necessary basis for developing effective strategies to comprehend and learn low-frequency words implicitly. This is because implicit vocabulary learning is possible only when the proportion of unknown words is very low (Liu and Nation, 1985; Schmitt, 2000; Nation, 2001).

This revival of explicit L2 vocabulary learning is driven in part by the fact that available computer-generated lexical corpora nowadays allow researchers to determine actual word patterns, multiword units and more precise frequency information from authentic texts (Nation and Waring, 1997; Gu, 2003).

An important aspect of L2 vocabulary learning is its autonomous nature. For two reasons, autonomous vocabulary learning is often the only option left for L2 learners. First, L2 vocabulary learning requirements go beyond a standard teacher-led course (Sternberg, 1987; Nation, 1990; Tudor, 1993). Second, teacher-learner contact is often weak (Tudor, 1993; Cotterall, 1995a). The need for autonomous learning of L2 vocabulary is most obvious in the case of EFL adult learners in general and EFL learners majoring in English in particular; as is the case with our subjects.

One of the main features of autonomous learning is that learners take some responsibility for their own learning by setting goals, and planning and evaluating

their progress over time (*ibid.*). In order to be able to practise autonomous learning effectively, learners undoubtedly need to be aware of the nature and requirements of learning L2 vocabulary (cf. 2.2.1.2). White (1995:209) argues that '*[t]he ability to exercise autonomy requires the learner to have developed an understanding of the nature of language learning and of his her role in that process, and as part of this to have developed an appropriate repertoire of language learning strategies.*'

However, autonomous learning of L2 vocabulary requires that learners have positive beliefs in and attitudes towards vocabulary learning in general and VLSs in particular. Learner training programmes which aim to promote learner autonomy often focus on training learners in tactics and strategies and ignore important factors such as learner attitudes towards autonomy, beliefs and expectations about language learning and teaching, personal needs and objectives, learning styles and self-evaluation (Victori and Lockhart, 1995). Tudor (1993) maintains that learners' affective and intellectual resources should be exploited as fully as possible, because the process of learning another language involves the learner as a complex human being. Since the use of VLSs is for their own benefit, learners' feelings towards each strategy and their belief in its efficacy should be taken into consideration (Horwitz, 1988; Wenden, 1987; both cited in Schmitt, 1997). Horwitz (1999:557) affirms that '*[u]nderstanding learner beliefs about language learning is essential to understanding learner strategies and planning appropriate language instruction.*' Learners must thus be regarded as effective participants in this process, because their beliefs about language learning affect their experiences and actions (*ibid.*). Similarly, Cotterall (1995a) argues that exploring learners' beliefs is essential for promoting learner autonomy because this will allow learners and teachers to have better understanding of the language learning process and of their perspective roles in it. In

addition, learners' attitudes have a profound effect on their learning outcomes, by contributing to or impeding the process of learning.

A number of researchers (e.g. Rubin, 1989; Wenden, 1987; Horwitz, 1985) also assert the need to investigate learners' attitudes and their knowledge about language learning. The current study, therefore, will investigate overall tendencies among Saudi EFL (as opposed to ESL) learners majoring in English with regard to their use and evaluation of VLSs. This will be achieved through investigating individual tendencies in using and evaluating VLSs. Horwitz (*ibid*: 558) says that:

While it is still entirely appropriate to attend to the distinctive characteristics of each language learner, language teachers also have an inherent interest in the more general aspects of learner beliefs. Teachers cannot tailor instruction to each individual belief of each individual student and must out of necessity deal with groups of language learners.

1.2 Motivation and aims of the study

The current study is generally motivated by a number of factors. First, much of the work on LLSs is based on studies carried out in ESL settings in North American universities (LoCastro, 1994). Some researchers (e.g. O'Malley and Chamot, 1990; Reid, 1987) have questioned the possibility of applying the findings of these studies on L2 learners in different learning environments. Second, L2 vocabulary learning by advanced learners has often been seen as a '*problem marginal to other language learning activities*' because it is commonly believed that L2 vocabulary can be learned through participation in other language activities (Marton, 1977). Third, despite the fact that the growing interest in L2 vocabulary learning is in line with the increasing interest in LLSs, the area where the two fields meet (i.e.

VLSS) has not received due attention (Schmitt, 1997). Fourth, the majority of previous research on L2 vocabulary learning has focused on individual VLSSs or a small group of them (*ibid.*). Fifth, foreign language learners (e.g. Saudi EFL English majors) usually show comparatively lower strategy use than second language learners who learn a language in an environment where it is the language of daily survival and communication (Oxford and Ehrman, 1995).

To the best of my knowledge, there is no previous study which focuses on the use of a comprehensive set of VLSSs by Saudi EFL learners in general and Saudi or Arab EFL learners majoring in English in particular. Therefore, the current study is an attempt to enhance the status of vocabulary learning at the university level by investigating the use and evaluation of VLSSs by Saudi EFL learners majoring in English. It is important to determine the strategies that they already use and the strategies that they need to be introduced to and trained in. This attempt is motivated by the researcher's experience as an English-major student and teacher, which has made him aware of the fact that vocabulary learning is not precisely defined in the curriculum in spite of the evident limitations of vocabulary knowledge, both productively and receptively of Saudi EFL learners majoring in English.

Since using VLSSs, especially in the case of advanced adult learners, should be an autonomous aspect of L2 learning in which learners try to meet their own individual L2 vocabulary needs, the current study will investigate the subjects' attitudes towards each of the VLSSs in order to articulate realistic recommendations for a strategic training programme. This is because a successful language learning programme is one which fulfils the learners' needs. Since adult learners are more aware than their teachers of their learning circumstances and needs, it is unwise not to take into consideration their attitudes and beliefs (Tudor, 1993).

In drawing up a scheme for the current study, it was necessary to analyse two existing taxonomies for VLSs, and formulate a working taxonomy for the current experiment. It is therefore a subsidiary aim of the study to suggest a revised taxonomy of VLSs.

1.3 Structure of the study

The thesis is divided into seven chapters. Chapter 1, this chapter, sets out the background, motivation and aims of the study.

Chapter 2 reviews the literature pertaining to LLS and VLSs. It consists of two main sections. The first section presents some definitions of LLSs and outlines their characteristics, the factors which influence their use, and some taxonomies of LLSs. This section aims to provide a theoretical and empirical basis for the following section on VLSs. The section on VLSs first deals with three issues: 1) cognitive knowledge of L2 vocabulary, 2) facts about L2 vocabulary size, and 3) implicit and explicit L2 vocabulary learning. This is followed by a discussion of two taxonomies of VLSs devised respectively by Schmitt (1997) and Nation (2001). Finally, the taxonomy of the current study is described and discussed in detail.

Chapter 3 presents the experiment which forms the basis for this study. It describes the subjects and the research instruments used for collecting and analysing research data.

Chapter 4 involves the analysis of the questionnaire data. This chapter is divided into three sections. Each section is concerned with the analysis of the subjects' use and evaluation of one of the three categories of VLSs: 1) metacognitive strategies, 2) discovery strategies, and 3) consolidation strategies. The overall findings will be outlined at the end of the chapter.

Chapter 5 is devoted to the analysis of the subjects' think-aloud protocols (TAPs). It contains an overall discussion of the subjects' performance in the TAP experiment. It also describes the main criteria used to classify the subjects' TAPs into five performance groups. Nine representative samples, one from the first group and two from each other group, are discussed at length. Finally, a summary of the overall findings of the subjects' TAPs is presented.

Chapter 6 provides a number of pedagogical recommendations drawn from the main findings of the study. The chapter first discusses some relevant aspects of autonomous vocabulary learning. In section two it suggests a number of more strategy-specific implications.

Chapter 7 concludes the thesis. It provides a summary of the chapters, indicates the limitations of the study and proposes some suggestions for future research.

CHAPTER TWO

LITERATURE REVIEW

This chapter is divided into two main sections dealing with, respectively, LLSs and VLSs. The discussion of LLSs covers four issues: 1) their definition, 2) their classification, 3) factors affecting their use, and 4) their taxonomies. The analysis of these issues provides the necessary thematic basis for the ensuing discussion of VLSs. This is divided into three parts, addressing: (1) some issues of relevance to VLSs, (2) taxonomies of VLSs and (3) the taxonomy of the current study.

2.1 LLSs

It is important that the discussion of LLSs precedes that of VLSs because the former will allow us to better understand the theoretical and empirical background of VLSs, especially in respect of metacognitive strategies for learning L2 vocabulary. The strong relation between the general LLSs and the more specific VLSs lies in the fact that the majority of LLSs in the proposed taxonomies of LLSs are in fact VLSs or can be used to learn L2 vocabulary (Segler, 2001). Therefore, Schmitt (1997:200) suggests that *‘combining the results from general learning strategies research with those from more vocabulary-specific studies allows us to derive a number of tentative general conclusions about vocabulary learning strategies.’*

Vocabulary learning has been found by some researchers to be L2 learners’ primary focus in their use of the more general LLSs (e.g. O’Malley *et al.*, 1985; Chamot, 1987; Naiman *et al.*, 1978). This may be because it is easier to apply learning strategies to the relatively discrete nature of vocabulary learning than to the more integrated language activities (e.g. listening comprehension, oral presentation).

In addition, classrooms tend to encourage discrete activities over integrative ones (Schmitt, 1997). More importantly, L2 learners may also believe in the importance of learning L2 vocabulary and consequently pay greater attention to the use of strategies that improve the use and retention of L2 vocabulary (Horwitz, 1988; Schmitt, 1997). Therefore, it is believed that exploring previous studies on LLSs will help us to establish a taxonomy relevant to the current study.

Within the field of L2 learning, the last two decades have seen a fast-growing shift of focus. Attention has moved away from the teacher and towards the learner: away from the content of teaching material and preoccupation with methods of teaching it, and towards exploration of what learners really do in the learning process. This has resulted in an increasing interest in studying and investigating those LLSs employed by L2 learners in order to improve and practise their L2. This development has been in line with developments of cognitive psychology (Williams and Burden, 1997). Serious research into LLSs began in the 1970's and showed that LLSs can be defined and classified. It aimed, in the first place, to recognise the strategies used by successful learners, on the assumption that underachieving learners can be introduced to and trained in using these strategies (e.g. Rubin, 1975, 1981; Stern, 1975; Naiman *et al.*, 1978; Bialystok, 1978; Krashen, 1982; McLaughlin *et al.*, 1983; Spolsky, 1985; Ahmad, 1989).

Learning strategies are based on principles from two fields of study: second language acquisition and cognitive psychology. Wenden (1987; cited in Kudo) identified four areas examined by researchers in the field of LLSs. These are:

1. What do L2 learners do to learn a second language?
2. How do they manage or self-direct these efforts?
3. What do they know about which aspects of their L2 learning process?

4. How can their learning be refined and developed?

The following subsections will elucidate a number of issues broadly concerned with LLSs.

2.1.1 Definitions of LLSs

Although LLSs have been defined by a number of key figures in the field, there is no absolute consensus concerning the definition and consequently the classification of strategies (Oxford, 1990). O'Malley *et al.* (1985:22) state that:

There is no consensus on what constitute a learning strategy in second language learning or how these differ from other types of learner activities. Learning, teaching and communication strategies are often interlaced in discussions of language learning and are often applied to the same behaviour. Further, even within the group of activities most often referred to as learning strategies, there is a considerable confusion about definitions of specific strategies and about the hierarchic relationship among strategies.

Similarly, O'Malley and Chamot (1990:114) comment on this issue by saying:

...in second language acquisition there had been no consensus on the definition and classification of strategies, and there continued to be persistent confusion over the distinction between learning strategies and other types of strategies applied more to language use, such as communication and production strategies.

A number of differences can, in fact, be observed in the definitions. First, the definitions seem to have changed over time. The early definitions focus on linguistic or sociolinguistic competence, whereas later definitions put more emphasis on processes and characteristics of LLSs (Lessard-Clouston, 1997). Second, some

definitions (e.g. Cohen, Stern, Chamot, and to some extent Rubin and Wenden) explicitly state that using LLSs is, more or less, conscious. The different definitions of LLSs involve subjective attempts which in turn have led to different classifications of LLSs based on the results of different data collections. Stern (1983:405) defines LLSs as the *'general tendencies or overall characteristics of the approaches employed by the language learner, leaving learning techniques as the term to refer to particular forms of observable learning behaviour, more or less consciously employed by the learner'*. Tarone (1983: 67) defines LLSs as the attempts made by L2 learners to *'develop linguistic and sociolinguistic competence in the target language ... to incorporate these into one's interlingua competence.'* Chamot (1987:71) sees LLSs as the *'techniques, approaches, or deliberate actions that students take in order to facilitate the learning and recall of linguistic and content area information.'* Rubin (1987:23) defines LLSs as *'strategies which contribute to the development of the language system which the learner constructs and affect learning directly.'* Wenden (1987: 6) states that *'learning strategies refer to language learning behaviours learners actually engage in to learn and regulate the learning of a second language.'* Cohen (1990:5) describes LLSs as *'learning processes which are consciously selected by learners'*. In addition, she (1998:4) maintains that *'language learning and language use strategies can be defined as those processes which are consciously selected by learners and which may result in action taken to enhance the learning or use of a second or foreign language, through the storage, retention, recall, and application of information about that language.'* O'Malley and Chamot (1990:1) add to their earlier definition the concept of *thoughts*, defining LLSs as *'the special thoughts or behaviors that individuals use to help them comprehend, learn, or retain new information ... Learning strategies are special ways of processing information*

that enhance comprehension, learning, or retention of the information.' Despite their differences, the above definitions, however, are consistent with each other in stating that LLSs are based on learner autonomy. Oxford (1990:8) stresses the ideas of learner interest and self-direction in strategy use and defines learning strategies as *'specific actions taken by the learner to make learning easier, faster, more enjoyable, more self-directed, more effective, and more transferable to new situations.'* Wenden and Rubin's definition (1987:19) includes plans in strategy use: *'any sets of operations, steps, plans, routines used by learners during learning so as to better help them understand, learn, or remember new information.'*

These definitions thus agree that LLSs aim to develop one's receptive and productive use of L2 in an autonomous way. Typical definitions of LLSs are fairly general and tend not to cover every aspect of strategy use. Researchers, in fact, have paid more attention to defining the subsets of strategies or sometimes every strategy. Rubin's definition, for instance, states that LLSs *directly affect learning* while her strategy classification (1981) is divided into strategies that directly affect learning and processes that indirectly contribute to learning.

2.1.2 Characteristics of LLSs

Previous research has shown the important role that LLSs can play in making language learning more effective and more enjoyable. It has been found that good language learners use more LLSs in more effective ways that distinguish them from poor language learners (Green and Oxford, 1995; Naiman *et al.*, 1978; Oxford, 1985; Rubin, 1975, 1981, 1987; Stern, 1983; O'Malley *et al.*, 1985; Oxford, 1990; Wharton, 2000; Wong-Fillmore, 1976; Bialystok, 1979; Cohen and Aphek, 1981; Chamot and O'Malley, 1987; Sanaoui, 1995; among others). Oxford (1990: 9) proposes a list of features for LLSs. They are as follows:

1. contribute to the main goal, communicative competence;
2. allow learners to be more self-directed;
3. expand the role of teachers;
4. are problem oriented;
5. are specific actions taken by the learner;
6. involve many aspects of the learner (e.g. culture, attitudes), not just the cognitive;
7. support learning both directly and indirectly;
8. are not always observable;
9. are often conscious;
10. can be taught;
11. are flexible;
12. are influenced by a variety of factors.

The first feature reflects the increasing interest in LLSs in relation to the prevailing communicative approach in recent language learning and teaching methodologies. The second, third and fifth features concern the fundamental concept that strategy use is based on promoting learner autonomy by allowing learners to take

more responsibility for their learning. This is not intended to minimise the role that teachers play in the learning process. In fact, promoting learner autonomy through strategic training requires more efforts and expertise on the part of teachers. Research on LLSs (e.g. Oxford, 1990; Wenden and Rubin, 1987; Cohen, 1990; Dickinson, 1987; all cited in Wharton, 2000) stresses the value of LLSs with regard to promoting learner autonomy. The fourth feature underlines the purpose of strategy use. LLSs are used to overcome weaknesses in L2 use. The sixth and twelfth features refer to the cognitive and non-cognitive factors affecting strategy use. Learners' attitudes, culture, age, gender and proficiency level are found to noticeably affect strategy use. The seventh feature makes a basic distinction between two types of LLS: direct (cognitive) and indirect (metacognitive). The eighth and ninth features draw our attention to the fact that some strategies cannot be recognised by observation alone and that some strategies, especially at the advanced level, could be used automatically. That is, LLSs could be either conscious or unconscious. As for the tenth feature, research into LLSs suggests that training L2 learners in LLSs can help them become better learners. The interest in LLSs was initially focused on investigating the strategies used by the more successful language learners in order to introduce the less successful learners to these strategies and train them in how to use them effectively. Subsequent studies have shown that frequent and effective use of LLSs correlates positively with *higher* proficiency levels. Underachieving learners are found to use the same type of LLSs as the more successful learners, but less effectively (Skehan, 1989).

The importance of LLSs also lies in the fact that many recent models of SLA include LLSs (e.g. Gardner and MacIntyre, 1993; MacIntyre, 1994; McLaughlin, 1987; all cited in Green and Oxford, 1995). In his review of learning strategy research in the context of various models of acquisition, Skehan (1989; cited in Green and

Oxford, 1995), for example, focused on LLSs as one of the most important individual difference factors in SLA. Likewise, O'Malley and Chamot (1990) maintain that a successful theory for SLA must (1) explain how L2 knowledge is stored in memory, (2) explain how the process of SLA leads to automatic comprehension and production, (3) explain a wide variety of L1 and L2 constructs, and (4) explain the nature of LLSs, how strategies are learnt and may become automatic and why they affect learning in a constructive way.

2.1.3 Factors Affecting Use of LLSs

The relationship between LLSs use and learner variables has been the focus of a growing body of research (Green and Oxford, 1995). Previous research suggests that there are a number of factors that can affect the types, range and frequency of strategy use. These include cultural background, L2, stage of learning, motivation, FL versus SL settings, language learning styles (including the influence of language teaching methods and task requirements), attitudes and beliefs, type of task, tolerance of ambiguity, age, gender and strategy training (Wharton, 2000; Oxford and Burry-Stock, 1995; Oxford and Nyikos, 1989; Green and Oxford, 1995). Below is a brief discussion of twelve major factors that may explain the choice of VLSs used by Saudi EFL learners in the current study, bearing in mind that some factors discussed in the literature do not apply to them (e.g. previous language learning, as English is the only FL they have learnt so far).

2.1.3.1 Cultural Background

Learners from different cultures use certain types of strategies at different levels of frequency (Bedell, 1993; cited in Oxford and Ehrman, 1995). Some researchers (e.g. Haug and Van Naerssen, 1987; Politzer, 1983; Politzer and McGroaty, 1985; Tyacke and Mendelsohn, 1986; all cited in Wharton, 2000) found that L2 Asian learners prefer rote memorisation strategies and focus on linguistic codes. O'Malley *et al.* (1985; cited in Wharton, 2000) also found that Asian students were more reluctant than Hispanic learners to try new strategies and less responsive to strategy-training. Politzer (1983; cited in Oxford and Ehrman, 1995) found that the Hispanic learners used more social, interactive strategies, while Asian learners preferred greater rote memorisation, due to previous school experience which put more emphasis on memorisation and rehearsal. Cultural difference has a strong effect on the appropriateness of learning and teaching methodology (Hurd, 2003). Unlike the more independent learning environments where learner autonomy is a priority, language learning environments which call for more reliance on teacher rather than self-regulation, rote-learning as opposed to creative language use and an emphasis on accuracy at the expense of fluency may hinder the use of LLSs on an autonomous basis (*ibid.*).

2.1.3.2 L2

The historical and linguistic relation between L1 and L2 can affect the use of some strategies. The use of cognates is not possible for Japanese learners of English, for example (Schmitt, 1997; Wharton, 2000), whereas German learners of English can certainly benefit from this strategy. Likewise, the use of strategies that require availability and accessibility of L2 material or native speakers differs from one place to another.

2.1.3.3 Stage of Learning/Proficiency

Research has shown that L2 learners tend to use different LLSs at different learning stages (e.g. Chamot *et al.*, 1987; Green and Oxford, 1995; Schmitt, 1997; Ahmad, 1988). This is quite natural given the fact that some strategies suit the earlier stages of learning (e.g. using word lists and word cards) while some other strategies (e.g. implicit learning through controlled or free reading) require more advanced proficiency levels. Higher level learners reported greater use of metacognitive strategies in O'Malley *et al.*'s (1985) study. Chamot *et al.* (1987) discovered that cognitive strategy use decreased and metacognitive strategy use (planning, organizing, and evaluating) increased with learners' rise in level of the language course. Chamot *et al.* (1988 a, b) also found that the more effective FL learners use LLSs more frequently than the less effective ones. They also showed a more varied use of LLSs and were more effective in using the strategies that the less effective learners used. Rubin (1975; cited in Griffiths, 2004) found that successful learners were strongly motivated to learn, more willing to guess and make mistakes, practise and monitor their own language and the language of others and pay more attention to the form and meaning of their L2. Ahmed (1989) and Lawson and Hogben (1996) found that good language learners effectively use a larger number of different VLSs than poor language learners. Sanaoui (1995) also found that the more successful learners follow a more systematic approach towards L2 vocabulary learning. Ehrman and Oxford (1995; cited in Griffiths, 2004) investigated the relationship between proficiency level and LLSs (among other variables) and found that there was a strong relationship between success in L2 learning and the use of the cognitive strategies of looking for patterns and reading for pleasure in L2.

2.1.3.4 Motivation

Previous research reports that there is a relatively strong correlation between motivation and use of LLSs. The more motivated learners are found to use more types of LLSs (Ehrman and Oxford, 1990; Oxford and Ehrman, 1988; Sanaoui, 1995; Ahmed, 1988). Since the use of LLSs is targeted towards more independent language learning, it can be argued that motivation is, in fact, the most significant determining factor in L2 learning achievement. Learner motivation can be negatively affected by having difficulty in coping with the materials and assessing personal progress, perceived inadequacy of feedback, frustration at unresolved problems, and lack of opportunities to practise with others and share experiences (Hurd, 2003). Oxford and Nyikos (1989) found in a study on the variables affecting choice of learning strategies used by 1,200 university students of foreign languages in the United States that motivation was the most powerful influence on strategy choice. Language proficiency self-ratings in speaking, reading and listening also significantly affected strategy choice in that the higher the learner's self-rated proficiency the more strategy use was reported. It was also found that the students who elected to learn the language rather than taking it as a compulsory course for graduation used more strategies. Oxford and Nyikos found that motivation significantly interacted with several variables including elective vs. required status, university major and number of years of language study. Career orientation was also found to affect strategy use, with students majoring in humanities/social science/education using more strategies than technical majors.

2.1.3.5 Language Learning Environment

Gu (2003) defines the learning environment as the socio-culturo-political environment where learning takes place. It can include teachers, peers, classroom climate or ethos,

family support, social and cultural tradition of learning, curriculum, and availability of input and output opportunities. These factors can affect the appropriateness of strategy use according to the given learning environment. Therefore, a strategy which is suitable or possible in a certain learning environment may become inappropriate or impossible in another (*ibid.*). For example, FL and SL learning yield different learning environments. Strategy use in terms of quality and quantity will be greater if learning another language occurs in its natural environment, where it is the language of daily survival and communication and where native speakers and media sources allow rich L2 input and output. By contrast, learning another language in one's home country where the availability of native speakers or media sources of the other language is scarce or absent will, of course, result in different strategy use (Oxford, 1992/1993). Previous research shows that learners in SL settings use some LLSs more frequently than learners in FL settings (e.g. Green and Oxford, 1995; Oxford and Burry-Stock, 1995).

2.1.3.6 Language Learning Styles

L2 learners from different cultural backgrounds may show different learning styles. Previous research shows that learning styles determine strategy use (Wharton, 2000). FL learning settings where the grammar-translation method is the dominant teaching method seem to encourage rote memorisation strategies, whereas SL learning settings are found to facilitate the strategies which meet the requirements of rich input and output. Analytic-style students prefer strategies such as contrastive analysis, rule-learning, and dividing words and phrases, while global-style students use strategies to find meaning (guessing, scanning, predicting) and to converse without knowing all the words (paraphrasing, gesturing) (Oxford, 1990).

2.1.3.7 Attitudes and Beliefs

Attitudes towards and beliefs about certain strategies have a profound effect on their use (Cotterall, 1995b). Negative attitudes and beliefs often lead to poor strategy use (Oxford, 1990).

2.1.3.8 Gender

Previous empirical studies on strategy use involving gender report more strategy use by females than males (e.g. Politzer, 1983; Oxford, *et al.*, 1988; Ehrman and Oxford, 1989, 1995; Oxford and Nyikos, 1989).

2.1.3.9 Type of Task

Strategy use has also been found to be strongly linked to the type of task involved. Learning a word for receptive purposes, for example, requires different learning strategies than learning a word for productive purposes (Nation, 2001). Thus Oxford (1990) has discussed the application of LLSs in each of the four language skills. Similarly, Nation (1990, 2001) has also discussed the use of vocabulary strategies with each of the four skills.

2.1.3.10 Tolerance of Ambiguity

Students who are more tolerant of ambiguity use significantly different learning strategies in some instances than do students who are less tolerant of ambiguity (Oxford, 1990). The strategies of guessing, skipping and risk taking are found to be more popular among more ambiguity-tolerant learners who are not discouraged by expected criticism from others or self-criticism (Oxford and Ehrman, 1995).

2.1.3.11 Age

Strategy use is also affected by the different ages of learners (Oxford, 1989; Oxford and Ehrman, 1993). Ahmed (1989) reports progression in strategy use as learners become more experienced. Similarly, Schmitt's (1997) study shows that Japanese learners' use of and attitudes towards some VLSs do change over time. Oxford and Ehrman (1995: 363) state that:

... younger learners are more likely to attain fluency and native-like pronunciation through communicative practice strategies. Because of their more developed abstract thinking capabilities, older language learners often use strategies that allow them to analyze the grammatical system and to apply greater "world knowledge" to the language learning context. Advantages of language learners at different ages are attributed to: one or more critical periods for language learning, prior experience in language learning, onset of formal operations, cognitive maturity, kind of input, affective factors, and sociocultural factors.

2.1.3.12 Strategy Training

Training L2 learners in how to effectively use LLSs and introducing them to the characteristics and features of strategies in general and each strategy in particular may affect their strategy use (Oxford, 1990; O'Malley and Chamot, 1990). Al-Seweed (2000) reports that Saudi EFL learners developed their word-solving strategies (WSSs, hereafter) after undergoing a strategy training programme.

2.1.4 Taxonomies of LLSs

A number of researchers have tried to develop classification schemes for LLSs (e.g. Rubin, 1981, 1987; Cohen, 1990; O'Malley *et al.*, 1985; Oxford, 1990; Wenden, 1987, 1991). Oxford (1990: 16-17), however, draws our attention to the fact that:

... any current understanding of language learning strategies is necessarily in its infancy, and any existing system of strategies is only a proposal to be tested through practical classroom use and through research. At this stage in the short history of language learning strategy research, there is no complete agreement on exactly what strategies are; how many strategies exist; how they should be defined, demarcated, and categorised; and whether it is—or even will be possible to create a real, scientifically validated hierarchy of strategies.

Oxford (1994) states that L2 strategy classification systems devised by some key figures in the field can be divided into five groups as follows:

- a) systems related to successful language learning (Rubin, 1975; Ahmed, 1988)
- b) systems based on psychological functions (O'Malley and Chamot, 1990);
- c) linguistically based systems dealing with guessing, language monitoring, formal and functional practice (Bialystok, 1981) or with communication strategies like paraphrasing or borrowing (Tarone, 1983);
- d) systems related to separate language skills (Cohen, 1990); and
- e) systems based on different styles or types of learners (Sutter, 1989).

The following subsection will present some earlier taxonomies which can be considered as the basis for the more recent taxonomies of Oxford (1990) and O'Malley and Chamot (1990). The taxonomies of Oxford and O'Malley and Chamot will be discussed in the succeeding subsections. The works of Oxford and O'Malley and Chamot are very important studies in the field of LLSs. Ellis (1994) considers

that the studies of O'Malley and Chamot (1990) represent the theoretical grounds for studying LLSs, whereas the work of Oxford (1990) provides a comprehensive taxonomy for LLSs.

2.1.4.1 Earlier Taxonomies

The early attempts by Rubin (1975) and Stern (1975) to devise classification schemes for LLSs were descriptive studies based on describing and classifying what good language learners usually do in order to learn another language. Later Naiman *et al.* (1978) and Rubin (1981) based their classification schemes on these two earlier studies and used interviews, classroom observations and diaries to subjectively analyse and classify LLSs.

Naiman *et al.*'s classification of LLSs is divided into two categories. The first type is labelled 'primary strategies' and includes the strategies employed by all good language learners. The second type is labelled 'secondary strategies'. These are the strategies used by some good language learners. Their classification is based on interviews with 34 good language learners and on an initial strategy scheme proposed by Stern in 1975 (O'Malley and Chamot, 1990). In fact, the classification includes techniques as well as strategies. Techniques of language learning focus on certain aspects of language learning, such as grammar, vocabulary, listening comprehension, learning to talk, and learning to write and learning to read. The main features of Naiman *et al.*'s classification of the techniques used by good language learners can be summarised as follows:

- a) The primary strategy classification of Naiman *et al.* consists of five strategies as follows (see appendix one): (1) active task approach, (2) realisation of language as a system, (3) realisation of language as a means of communication and interaction, (4) management of affective strategies, and (5) monitoring L2 performance;

- b) Naiman *et al.*'s classification covers the main four skills of reading, writing, speaking and listening in addition to grammar and vocabulary;
- c) It connects writing with reading (by frequently reading what you expect to write);
- d) Guessing refers to inferring grammatical rules;
- e) Vocabulary techniques are the most frequently reported techniques, suggesting two implications: (1) L2 vocabulary receives greater attention than other aspects of language and (2) good language learners are aware of the techniques of learning L2 vocabulary;
- f) The techniques of learning to read involve the idea of graded reading by reading familiar topics and reading texts at the beginner's level;
- g) L2 sound acquisition is considered a separate language aspect from listening comprehension;
- h) Learning word meaning from context is considered to be both a vocabulary learning technique and a learning to read technique;
- i) It is less focused on vocabulary acquisition than Rubin's (1981) classification, as it includes only five representative examples that would be suitable for vocabulary learning activities: (1) writing down words to memorise them, (2) using cognates, (3) relating new dictionary words to others in the same category, (4) using circumlocutions and (5) memorising courtesies and phrases.

Rubin (1981), on the other hand, divides LLSs into two basic categories: direct and indirect strategies (see appendix two). Rubin's classification focuses more on VLSs than Naiman *et al.*'s. The majority of Rubin's representative examples of direct strategies are targeted towards improving use and recall of L2 vocabulary. There are six direct strategies in Rubin's classification. The first direct strategy is seeking clarification/ verification by asking for an example of how to use a word or expression

or repeating words to confirm understanding. Rubin makes this strategy focus mainly on vocabulary learning, though it can also be used with grammar and other aspects as well. The second strategy is monitoring. This strategy involves correcting errors in pronunciation, vocabulary, spelling, grammar or style. This strategy involves aspects other than vocabulary. The third direct strategy is memorisation. Rubin's representative examples of the strategy of memorisation include taking notes of new words, saying words aloud, using mnemonic techniques, and writing words repeatedly. Rubin's examples here focus mainly on vocabulary learning. Likewise, the strategy of guessing/inductive inferencing aims to figure out the meaning of new words using the key words, structure, pictures, context, etc. The strategy of deductive reasoning refers to comparing the native/other language to the target language, grouping words and looking for rules of co-occurrence. Finally, the direct strategy of practice differs from the indirect strategy of creating opportunities for practice in that the former involves direct manipulation of L2. Rubin's representative examples of this strategy, however, focus primarily on improving L2 pronunciation through practising sounds and listening.

Indirect strategies, on the other hand, are processes that contribute indirectly to learning. Rubin's classification comprises two indirect strategies. The first strategy concerns creating opportunities for practice either with native speakers or fluent speakers of the target language or by watching or listening to authentic L2 use. The second strategy is using production tricks for communication purposes. Representative examples of such tricks include using circumlocution, using synonyms, cognates, etc.

In a later work, Rubin (1987) proposes another taxonomy in which LLSs are divided into three main categories: (1) learning strategies, (2) communicative

strategies, and (3) social strategies. Learning strategies are sub-divided into two types: metacognitive and cognitive. Metacognitive strategies refer to general plans and goals set by the learner. They include planning, prioritizing, setting goals and objectives, and self-management. Cognitive strategies, on the other hand, are the steps or operations used by the learner for learning or problem-solving that require direct analysis, transformation or synthesis of learning materials. Rubin classifies cognitive strategies into six types: (1) classification, (2) guessing, (3) deductive reasoning, (4) practice, (5) memorization, and (6) monitoring. Rubin's second main category, communicative strategies, refers to strategies used by learners in conversations in order to compensate for their shortcomings in speaking or comprehension. Rubin's third category, social strategies, refers to the social activities that learners involve themselves in for the purpose of practising and improving their L2 proficiency level.

2.1.4.2 Oxford (1990)

In this section, the classification of LLSs by Oxford (1990) will be presented in detail. The purpose of this is to examine carefully how Oxford's classification can be applied to the current study of how a group of EFL learners uses VLSs and to build up better understanding of Schmitt's taxonomy of VLSs which, as Nation (2001) states, is based on Oxford's taxonomy of the more general LLSs. In addition, Oxford's taxonomy is the most often used strategy scale around the world (Oxford and Burry-Stock, 1995). Ellis (1994) describes Oxford's taxonomy as the most comprehensive taxonomy of LLSs.

Oxford (1990) divides LLSs into two main categories: direct strategies for dealing with language and indirect strategies for general management of learning (see

appendix three). Direct strategies directly involve the target language and are divided into three groups: (1) memory, (2) cognitive, and (3) compensation strategies. The three groups of direct strategies require different mental processing of L2 and for different purposes (*ibid*: 37). Memory strategies aim to help learners store and retrieve information. Cognitive strategies facilitate learners' understanding and use of L2 by many different means. Finally, compensation strategies are used to bridge some knowledge gaps during receptive and productive use of L2.

Memory strategies are of four types: (1) creating mental linkages, (2) applying images and sounds, (3) reviewing well, and (4) employing action. The strategy of creating mental linkages can be made through three activities: (i) grouping, (ii) associating/elaborating, and (iii) placing new words into a context. Grouping involves '*classifying or reclassifying language material into meaningful units*' based on part of speech (e.g. noun or verb), type (e.g. words about weather), function (e.g. words for car work), linguistic function, similarity, dissimilarity, etc. Associating/elaborating refers to '*relating new language information to concepts already in memory, or relating one piece of information to another, to create associations in memory.*' Placing new words into context can be made through '*placing a word or phrase in a meaningful sentence, conversation, or story in order to remember it.*'

The second set of memory strategies, applying images and sounds, involves four strategies. The first is using imagery by '*relating new language information to concepts in memory by means of meaningful visual imagery, either in mind or in an actual drawing*'. The second strategy is semantic mapping. It entails '*making an arrangement of words into a picture, which has a key concept at the centre or at the top, and related words and concepts linked with the key concept by means of lines or arrows.*' A semantic map explains how a set of words are linked to each other. The

third strategy of applying images and sounds is using the keyword method. This technique involves using auditory and visual links in two stages. In the first stage, an auditory link is created by associating a L1 word which is wholly or partly similar in sound with the new L2 word. Then, in the second stage, an image is created representing a relationship between the L2 word and the acoustically similar L1 word. Finally, applying images and sounds can also be made by representing sounds in memory; that is, '*remembering new language information according to its sound ... [through creating] a meaningful, sound-based association between the new material and already known material*'. Oxford gives an example using the two words *brat* (*brother* in Russian) and *brat* (*annoying person* in English).

The third main memory strategy in Oxford's classification is reviewing well. This category includes only a single strategy, namely structured reviewing. The underlying concept of this strategy is spaced intervals. For example, the first review can be made a few minutes after initial learning, a second one hour later, a third one day later, then a week later, and finally a month later. It can be argued, however, that structured reviewing can be considered an indirect strategy as it does not involve the target language directly, but is simply a result of planning the task of L2 learning.

Employing action, the fourth main category of memory strategies, consists of two strategies. The first is using physical response or sensation by '*physically acting out a new expression (e.g. going to the door), or meaningfully relating a new expression to a physical feeling or sensation (e.g. warmth)*'. The second strategy is using mechanical techniques by '*using creative but tangible techniques, especially involving moving or changing something which is concrete, in order to remember new target language information*'. Oxford gives the example of writing words on cards and rearranging the cards every time a word is learnt.

Oxford's definitions (italics above, pp: 40-43) and examples of memory strategies focus primarily on L2 vocabulary learning. The extent to which Schmitt's (1997) taxonomy of VLSs reflects Oxford's memory strategies will be considered in section 2.2.1.1.

Cognitive strategies, according to Oxford, '*are unified by a common function: manipulation or transformation of the target language by the learner.*' They serve four functions: (1) practising strategies, (2) receiving and sending messages, (3) analysing and reasoning, and (4) creating structure for input and output. Oxford lists five practice strategies. These are (i) repeating (*saying or doing something over and over*), (ii) formally practising with sounds and writing systems, (iii) recognising and using formulas and patterns (*being aware of using routine formulas ... and unanalysed patterns*), (iv) recombining (*combining known elements in new ways to produce a longer sequence*), and finally and most importantly, according to Oxford, (v) practising naturalistically by, for example, taking part in a conversation, reading and listening to authentic material. As is the case with the memory strategy of reviewing well, it can be argued that the strategy of practising naturalistically is more a metacognitive (controlling) strategy than merely a cognitive strategy, because, unlike the other practising strategies, by deciding to practise L2 naturalistically, the learner is not manipulating the L2 directly but simply following a plan to improve competence in the L2.

The second set of cognitive strategies, receiving and sending messages, includes two strategies: (i) getting the idea quickly by '*using skimming to determine the main ideas or scanning to find specific details of interest*', and (ii) using resources for receiving and sending messages.

The third set of cognitive strategies, analysing and reasoning, consists of five strategies. The main purpose of analysing and reasoning strategies, Oxford asserts, is to understand the meaning of a new expression or to create a new expression. The first of these strategies is reasoning deductively by *'using general rules and applying them to new target language situations'*. In the case of vocabulary learning this can be done by applying the rules of the English affixation system to new words. The second strategy is analysing expressions by *'determining the meaning of a new expression by breaking it down into parts'*. The third strategy involves contrastively analysing elements in L2 by comparing them to elements in L1 to find out similarities and differences. The fourth strategy is translating. That is, *'converting a target language expression into the native language; or converting the native language into the target language'*. Finally, the strategy of transferring refers to *'directly applying knowledge of words, concepts, or structures from one language to another in order to understand or produce an expression in the new language.'* The final set of cognitive strategies concerns creating structure for input and output. Oxford lists three strategies within this set: (i) taking notes, (ii) summarising, and (iii) highlighting. These three strategies can obviously apply to vocabulary learning.

The ten compensation strategies which aim to enable learners to overcome their comprehension or production limitations are clustered into two sets: (1) guessing intelligently in listening and reading and (2) overcoming limitations in speaking and writing. The first cluster concerns receptive use of L2, whereas the second concerns productive use. The use of guessing strategies, according to Oxford, is what distinguishes good language learners from poor ones, who *'often panic, tune out, or grab the dog-eared dictionary and try to look up every unfamiliar word harmful responses which impede progress toward proficiency'* (p. 47). There are two

strategies for guessing intelligently in listening and reading. These are (i) using linguistic clues (e.g. sentence structure, intonation, word form) and (ii) using other clues such as the knowledge of context, situation, text structure, world knowledge, etc. The other cluster for production compensation strategies encompasses eight strategies. These are (i) switching to the mother tongue, (ii) getting help, (iii) using mime or gesture, (iv) avoiding communication partially or totally, (v) selecting the topic, (vi) adjusting or approximating the message, (vii) coining words, and (viii) using a circumlocution or synonym. It is noteworthy that Oxford maintains that the production compensation strategies are used mainly to compensate for lack of suitable vocabulary.

Oxford, however, does not explain how the strategy of switching to the mother tongue can contribute to L2 learning, especially when the interlocutor does not speak the learner's L1. Equally, it is not clear how the strategy of using mime or gesture can be used as a learning strategy. Looking at Oxford's list of strategies for overcoming limitations in speaking and writing, one can question whether they do in fact represent learning or learner strategies. This is because they seem to lead to little or no learning. They simply represent what good learners may do when facing a production or a reception problem. The inclusion of communication strategies under LLSs is a controversial issue (Griffiths, 2004). Though some strategies may lead to learning, such as guessing and circumlocution, the communication strategies of avoidance and message abundance do not lead to learning (Brown, 1994). Ellis (1986) considers communication strategies to be learner strategies (not learning strategies) and argues that successful frequent use of communication strategies (skilful compensation for lack of linguistic knowledge) may discourage learning as learners may continue to successfully communicate without having to learn new information. The strategies of

a) avoiding communication partially or totally and b) selecting the topic are not held to be indicators of a good language learner by some researchers, who have found good language learners willing to take risks in their use of L2 (Oxford and Ehrman, 1995). Oxford, in fact, stresses that the main advantage of compensation strategies lies in the fact that they encourage language learners to keep on practising and gaining new information. Therefore, they can help learners become more fluent in what they already know and, in the meantime, allow them to gain new information about what is appropriate for a certain situation or language use. Tarone (1980; cited in Griffiths, 2004) also asserts that communication strategies may result in learning because by using L2 for communication the learner will be exposed to language input which in turn may lead to learning.

Oxford's indirect strategies are classified into three main types: (1) metacognitive, (2) affective and (3) social. The function of indirect strategies is to *'provide indirect support for language learning through focusing, planning, evaluating, seeking opportunities, controlling anxiety, increasing cooperation and empathy, and other means'* (p: 151).

Metacognitive strategies *'allow learners to control their own cognition that is, to coordinate the language process by using functions such as centring, arranging, planning, and evaluating'* (135). The first set of 'centring your learning' strategies includes three strategies. The first strategy is overviewing and linking with already known material. This can be best done, Oxford suggests, by following three steps: (1) learning why the activity is being done, (2) building the needed vocabulary and (3) making the association. Paying attention, the second strategy, involves *'deciding in advance to pay attention in general to a language learning task ... and or to pay attention to specific aspects of the language'* (138). One of the main aspects of L2

learning is, of course, vocabulary learning. The third strategy in this set is ‘delaying speech production to focus on listening’. It is based on the ‘silent period hypothesis’ which supports the idea of delaying speech until listening comprehension skills are better developed. But Oxford maintains that whether all learners need this strategy or not is a matter of debate among researchers. In the case of vocabulary development, researchers have also differed on the issue of explicit and implicit L2 vocabulary learning. In particular, some have called for focusing first on word lists and word cards and other explicit activities in order to build a sufficient vocabulary store before trying to learn more vocabulary items implicitly.

The second set of metacognitive strategies is ‘arranging and planning your learning’. It includes six strategies. These are: (i) finding out about language learning, (ii) organising, (iii) setting goals and objectives, (iv) identifying the purpose of a language task, (v) planning for a language task and (vi) seeking practice opportunities. The first strategy in this set requires *‘making efforts to find out how language learning works by reading books and talking with other people, and then using this information to help improve one’s own language learning’*. In the case of L2 vocabulary learning, for example, a learner will need to learn about the different requirements of L2 word knowledge (e.g. semantic features, grammatical features, collocations, register features, etc) and the theoretical and applied framework of VLSs. The other five strategies apply directly to L2 vocabulary learning as they represent important aspects of the metacognitive learning of L2 words. It can be observed here that Oxford considers practising naturalistically to be both a direct and an indirect strategy. According to Oxford, the very act of practising naturalistically is a direct cognitive strategy whereas the general strategy of looking for opportunities to practise naturalistically is an indirect metacognitive strategy with a planning intention.

The last set of the metacognitive strategies is 'evaluating your learning'. This includes two self-initiated strategies: self-monitoring and self-evaluation. Self-monitoring involves recognising reception and production errors and trying to reduce them. Self-evaluation involves evaluating one's own progress in language skills.

The second set of indirect strategies is affective strategies. These can be used to help learners regulate emotions, motivations and attitudes. Three main strategies are included in this set: (1) lowering one's anxiety, (2) self-encouragement, and (3) taking one's emotional temperature.

Finally, the indirect social strategies are used in order to help learners learn through interaction with other people. There are three sets of social strategies. These are (i) asking a teacher, a native speaker, or even a more proficient fellow learner for clarification, verification or correction, (ii) cooperating with other language learners, native speakers or a proficient user of L2 to improve language skills, and (iii) empathising with others through developing one's understanding of the L2 culture and through becoming aware of others' thoughts and feelings. Oxford's social strategies in general and the last strategy in particular seem to be more applicable to SL settings where the learner lives among native speakers of the L2.

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2.1.4.3. O'Malley and Chamot (1990)

O'Malley and Chamot (1990) argue that LLSs have been investigated under two related disciplines: (1) cognitive psychology and (2) second language acquisition. However, the two areas have developed independently of one another with little cross-referencing of concepts and approaches across topic areas. This has resulted in a lack of a theoretical framework to guide studies on LLSs and the influence they have on SLA. Accordingly, O'Malley and Chamot have tried to relate the cognitive theory in SLA to their definition and classification of LLSs, in an attempt to bridge the gap with regard to integrating strategic processing in SLA theories. They also add that the studies on LLSs in SLA are descriptive studies conducted on good language learners, in isolation from the experimental psychological studies of reading comprehension and problem solving by L2 learners, whose aim is to train L2 learners in using the strategies. This is despite the fact that both types of study aim to investigate the mental processing of experts compared to novices. O'Malley and Chamot (*ibid.*) criticise the subjective classifications of Rubin and Naiman *et al.* and observe that theories of second language proficiency and acquisition lack a precise description of the role of strategic processing in SLA. Therefore, they call for empirical and theoretical exploration of the role of LLSs in SLA through collecting empirical data by asking L2 learners to describe what they usually do in order to improve L2 comprehension and learning. Their attempt has resulted in formulating LLSs in an information-processing theoretical model (Kudo, 1999).

The studies of O'Malley *et al.* (1985), discussed below, are based on the theoretical framework of cognitive psychology suggested by Anderson (1980, 1983). They try to apply Anderson's model of mental operation in learning a skill to language learning. Anderson distinguishes two types of knowledge necessary for

learning a given skill: declarative and procedural knowledge. The former refers to what a learner knows about a certain thing, whereas the second refers to unconscious applications in order to overcome a specific problem to benefit from the acquired information. According to Anderson's theory, learning a certain skill (c.g. learning a foreign language) involves three stages: (1) the cognitive stage, (2) the associative stage, and (3) the autonomous stage. The cognitive stage involves learning a set of facts (spelling, pronunciation, meaning, grammatical rules, etc.). This stage is followed by the associative stage, in which a learner creates connections among the different facts learned in the first stage. The second stage is itself an introductory step towards the third stage, in which performance of the cognitive skills becomes more spontaneous and autonomous. In the case of learning a foreign language, a learner first acquires some information about, for example, patterns of pronunciation, sentence structures, etc. In the second stage, the learner commences a new process of relating information to use and eliminating errors. The third stage starts when the application of rules by the learner while performing a language skill becomes unconscious. Stage three consolidates stage two, especially with regard to eliminating the errors frequently committed in stage two. However, Kudo (1999:2) maintains that:

These stages are not distinct or mutually exclusive because the two types of knowledge are not restricted to a certain stage but used at different stages by learners: learners are always gaining new knowledge about the target language, making mistakes, and reducing these mistakes by learning more about the newly gained knowledge. Furthermore, while this process is taking place, new input is also being received, resulting in the same procedure. Therefore, it may be plausible to interpret the three stages not as distinct but as recurring processes.

O'Malley and Chamot (1990) apply this model of skill acquisition to LLSs. Declarative knowledge represents the information about learning strategies, whereas procedural information represents both the associative and the automatic use of language.

Nakamura (2000) observes that, unlike L2 grammatical rules that can be easily specified, specifying and learning the different features of L2 vocabulary is more problematic for L2 learners. In other words, it is less difficult for a learner to observe and learn (or be taught) L2 grammatical rules than to observe and learn the different features required for learning L2 vocabulary, especially collocation and register information. Anderson's three stages, therefore, can be said to be more challenging in L2 vocabulary acquisition (*ibid.*). In the cognitive stage, for example, the L2 learner is required to learn the parameters necessary for both productive and receptive use of a word, including meaning, spelling, pronunciation, grammatical features, collocational patterns, register feature, etc. This is followed by the associative stage in which this information about L2 words undergoes a comparison and contrasting process resulting in creating associations such as synonyms, antonyms, hyponymy, collocations, etc. In the third, autonomous, stage, the learner starts to use the information learnt and associations created in stages one and two more automatically.

In the following subsections, the studies reported in O'Malley and Chamot (1990) will be examined in order to provide an empirical framework for some issues to be discussed in later chapters.

2.1.4.3.1 LLSs Used by ESL learners

The initial classification of O'Malley *et al.* (1985) is based on Brown and Palinesar's classification of LLSs into metacognitive and cognitive strategies (O'Malley and Chamot, 1990). O'Malley *et al.*'s study adds a third category to include the strategies that involve social mediation. Their classification includes 25 independent strategy types (see appendix four).

The sample of O'Malley *et al.*'s study included 65 Spanish ESL learners and 5 Vietnamese ESL learners in addition to 22 of their teachers. Their proficiency level ranged from beginner to intermediate. The researchers used three methods to gather information on strategies used by students. The first instrument was a student interview. It included questions about strategy use with seven classroom tasks and two non-classroom tasks. The second instrument used was a teacher interview which involved the same procedures as the student interview. The third instrument was classroom observations which aimed to detect strategy use in classroom settings. The study's findings indicated three categories of LLSs, namely metacognitive, cognitive and social mediation strategies. The metacognitive strategies involve '*higher order executive skills that may entail planning for, monitoring, or evaluating the success of a learning activity*' (O'Malley *et al.*, 1990:44). Three subcategories for metacognitive strategies are recognised. They are strategies for (1) planning (advance organisers, directed attention, functional planning, selective attention and self-management), (2) monitoring (self-monitoring) and (3) evaluation (self-evaluation). The category of cognitive strategies includes the strategies that are directly related to the process of learning. The study proposed fourteen cognitive strategies. These are resourcing, repetition, grouping, deduction, imagery, auditory representation, keyword method, elaboration, transfer, inferencing, note-taking, summarising, recombination and

translation. Finally, the social strategies refer to interaction with others (classmates, teachers, native speakers, speakers of L2, etc) in order to learn and practise L2. They comprise two strategies: (1) questions for clarification and (2) cooperation. Below are some of the findings reported by O'Malley *et al.*:

1. Planning strategies head the list of the metacognitive strategies with a total percentage of 85%. The top planning strategies were selective attention (22.3% of metacognitive strategies), advance preparation (22.4%) and self management (19.6%).
2. The strategy of repetition was the most frequent cognitive strategy (19.6% of all cognitive strategies) and was followed by the strategy of note-taking (18.8%), the use of imagery (12.5%) and translation (11.3%). Repetition and translation strategies which require less conceptual processing achieved more than 30%.
3. The social/affective strategies were the least used strategies.
4. The metacognitive strategies were the most frequently used type of strategy. This reflects a high level of metalinguistic awareness.
5. With regard to language tasks, the highest frequencies of strategy use were for vocabulary learning, pronunciation, and oral drills, in that order. The least frequent strategies were for the listening comprehension tasks. This may reflect the frequency of task occurrence in the students' use of L2.
6. The subjects often rely upon types of strategies that require little elaboration or little active mental processing.
7. The teachers expressed strong interest in strategy use and training.

2.1.4.3.2 LLSs Used by FL learners: Descriptive Study

After the 1985 study above, Chamot, O'Malley, Küpper and Impink-Hernandez embarked on a three-year project (1985-1988) which aimed to investigate LLSs used in foreign language instruction (Chamot *et al.*, 1987). The project consisted of three empirical studies: a descriptive, a longitudinal and a course development study. In the current study, only the first and second studies which investigated LLSs used by high school students of Spanish and college students of Russian need be discussed. This is because the third study aimed to investigate the learning strategies taught by Spanish and Russian instructors.

The three aims of the descriptive study were (1) to check whether learners of Spanish and Russian use similar strategies and if the strategies used by both groups can be defined and classified using the classification scheme developed in the ESL descriptive study of O'Malley *et al.* (1985) discussed above; (2) to examine differences in strategy use between beginning, intermediate and advanced level students; and (3) to identify the task-based strategies used by sixty-seven high school learners of Spanish and thirty-four college students of Russian. A General Interview Guide was used as the only instrument to collect data on strategy use by the subjects. The guide describes nine language tasks. Questions follow each task description asking the subjects about 1) the tricks or techniques they usually use with a certain task, 2) what they usually do to prepare for a task, 3) how they performed the task while being engaged in it, and 4) how they recalled or checked the task after completion.

Broadly speaking, the classification of LLSs found to be used by these FL learners differed on one main point from that identified in the 1985 study of ESL speakers. It yielded the same main three categories but with the introduction of

affective strategies. Affective strategies refer to those which control one's emotions and negative ideas about L2. This can be partially done through understanding the nature of L2 vocabulary learning.

The following findings emerged from the study:

1. It revealed a different LLSs taxonomy for FL learners. Some of the strategies used by ESL learners in the previous study were absent and new strategies were reported (see appendix five).
2. The keyword method was not reported at all by the FL learners and the strategy of delayed production achieved a very low percentage (1%).
3. The strategy definitions underwent some modification in order to make them agree with the different strategy use of FL learners who performed additional language tasks (reading and writing).
4. The FL learners generally reported metacognitive and cognitive strategy use patterns similar to the ESL learners in the previous study, but they reported far more use of cognitive than of metacognitive strategies.
5. As with the ESL learners, metacognitive strategies used by the FL learners were found to prioritise planning strategies, such as selective attention, organisational planning and self-management.
6. The learners of Spanish reported more use of the strategy of translation whereas the intermediate and advanced learners of Russian reported more use of note-taking.
7. The most frequently used strategies by beginning learners in both groups were those of repetition, translation and transfer. The advanced learners used inferencing more often, but did not abandon the strategies of translation and repetition.

8. The least used strategies were the more cognitively active strategies, such as rehearsal, grouping, substitution, imagery, elaboration and summarising.
9. The social/affective strategies turned out to be the least used type of strategies with only 1% of all strategy occurrences. This finding could be partially a function of the instrument used to collect the data (interviews), which made insufficient allowance for free choice of some social strategies, such as asking a classmate or teacher for assistance and affective strategies such as self-talk.
10. Unlike the learners of Spanish, the learners of Russian reported more use of rehearsal and summarising strategies as a result of strategic training.
11. The more effective FL learners were found to use LLSs more often and showed a wider range of LLSs than the less successful FL learners.

2.1.4.3.3 FL Learners' Use of LLSs: Longitudinal Study

Chamot *et al* (1988a, b) also conducted a longitudinal study on strategy use by FL learners. Subjects were drawn from the previous descriptive study and represented both effective and ineffective beginning, intermediate and advanced levels. The subjects were followed longitudinally for four semesters in order to examine changes in their strategy use over time. A think-aloud methodology was used while the subjects were performing different language tasks. The study aimed to (1) identify the cognitive strategies used by learners of Spanish and Russian while performing different language tasks, (2) describe the range and frequency of strategies used for the different tasks, (3) examine differences in strategy use between effective and less effective language learners, and (4) examine changes in strategy use by individual FL learners. The subjects performed filling in activities using suitable vocabulary items; writing about a picture; speaking in a descriptive or role-playing activity; listening to

a dialogue, monologue or narrative; completing a cloze exercise; and reading for comprehension. At the outset there were 53 participants, 40 learners of Spanish (27 effective and 13 ineffective) and 13 learners of Russians (8 effective and 5 ineffective). By the conclusion of the study, graduation and attrition reduced the number to 15 learners of Spanish (13 effective and 2 ineffective) and 6 effective learners of Russian.

The longitudinal study revealed the following findings:

1. The definitions of LLSs were refined (see appendix six) to accommodate the new ways FL learners use them (e.g. advance organisation, organisational planning, selective attention, self-monitoring, self-evaluation, elaboration).
2. A new strategy category was identified, namely problem identification.
3. Social/affective strategies were again the least used strategies.
4. The learning environment clearly affected strategy use. A learning environment which focuses on L2 grammatical structures and analytical comparison with L1 will encourage the use of deduction and translation strategies. On the other hand, a learning environment which gives proficiency priority over accuracy will of course promote the use of inferencing and substitution strategies.
5. Learning motivation came as the strongest factor affecting strategy use. Other factors included programme objectives, prior FL study and task demand.
6. In addition to being associated with more frequent and more varied use of LLSs, the more effective FL learners also showed more effective use of the same strategies that the less effective learners.
7. The strategies differed in how they are linked to the different language tasks. Some strategies were used in all of the assigned tasks. These included self-monitoring and elaboration. The strategy of self-evaluation was used for only

three different tasks. Resourcing, inferencing, summarising, translation and deduction were used for two different tasks each. These results support two suggestions. First, teachers might train their students in using specific strategies for certain language tasks. Second, there should be a priority list in strategic instruction which places strategies in order of usefulness.

8. No clear pattern of change in strategy use was recognised during the one-year longitudinal study. The changes observed were mainly related to the type of tasks on which the subjects were asked to work.

2.2 VLSs

There is no taxonomy of VLSs that can be considered a comprehensive reference. This, Schmitt (1997) argues, may be because the process of learning L2 vocabulary is a mental process in the first place and because this process interlocks with the more general language learning and production strategies. Therefore, it is quite difficult to settle on a non-debatable taxonomy of VLSs. In addition, Schmitt asserts, with the exception of Ahmad's study (1988) which deals with all of the VLSs as a group, research into VLSs has focused on a small number of types comparing their effect on L2 vocabulary learning. Schmitt himself tries to address the lack of a comprehensive inventory of individual VLSs by providing a descriptive taxonomy of VLSs.

The taxonomy of VLSs used in the current study draws on the taxonomies of LLSs discussed in the previous section and on the taxonomies devised by Schmitt (1997) and Nation (2001) (to be discussed below, pp 68-72). The current study will also refer to some previous studies on VLSs (e.g. Ahmad, 1989; Gu and Johnson,

1996; Sanaoui, 1995; Schmitt, 1997; Nakamura, 2000) when discussing the current taxonomy and throughout the analysis chapters.

2.2.1 Important Issues in L2 Vocabulary Learning

Before discussing the taxonomies of VLSs suggested by Schmitt and Nation and the taxonomy devised for the current study, we need to explore a number of issues that have important implications for the use of VLSs. The first of the following three subsections concerns the complex process required in order to learn a L2 word. The second subsection looks into the significance of understanding the nature of L2 vocabulary. Finally, in the third subsection implicit and explicit learning of L2 vocabulary and examples of VLSs for each type of learning will be introduced.

2.2.1.1 Aspects of L2 Vocabulary Knowledge

One of the important aspects of L2 vocabulary learning is awareness of the complex processes for learning a L2 word. If the learner has this understanding, they can select the type of VLSs that can fulfil such requirements. Below are three lists proposed by Richards (1976), Carter (1998) and Nation (2001) which describe what is involved in knowing a word.

Richards (1976; cited in Read, 2000) produced a number of assumptions with regard to what the learner should know about L2 words in order to fully learn them. The assumptions are as follows:

1. Native speakers continue to develop their vocabulary knowledge throughout their lives;
2. Knowing a word involves knowing the degree of probability of meeting that word in spoken or written texts;

3. Knowing a word involves knowing the limitations on the use of that word according to variation of function and situation;
4. Knowing a word involves knowing the syntactic behaviour associated with the word;
5. Knowing a word involves knowing the underlying form of a word and the derivations that can be made from it;
6. Knowing a word requires knowing the network of associations between that word and other words in the language;
7. Knowing a word involves knowing its semantic value; and
8. Knowing a word involves knowing many of the different meanings associated with it.

Carter (1998: 239) also points out that knowing a word involves the following characteristics:

1. It means *knowing* how to use it productively and having the ability to *recall* it for active use, although for some purposes only passive knowledge is necessary and some words for some users are only ever known passively.
2. It means knowing the likelihood of encountering the word in either spoken or written contexts or in both.
3. It means knowing the syntactic frames into which the word can be slotted and the underlying forms and derivations which can be made from it.
4. It means knowing the relations it contracts to other words in the language and with related words in a L1 as well.
5. It means perceiving the relative coreness of the word as well as its more marked pragmatic and discoursal functions and its style-levels.

6. It means knowing the different meanings associated with it and, often in a connected way, the range of its collocational patterns.

7. It means knowing words as part of or wholly fixed expressions conveniently memorised to repeat – and adapt – as the occasion arises.

Carter (*ibid.*) also maintains that learning L2 vocabulary for receptive purposes requires using strategies that can help learners understand lexical items and store them in memory, whereas learning L2 vocabulary for production purposes relies on strategies which activate the lexical store to use items in contextually appropriate ways.

Nation (2001: 24-25) differentiates between receptive and productive aspects of L2 vocabulary knowledge, saying that *‘receptive vocabulary use involves perceiving the form of a word while listening or reading and retrieving its meaning. Productive vocabulary use involves wanting to express a meaning through speaking or writing and retrieving and producing the appropriate spoken or written word form.’*

Nation (2001: 27) lists the requirements for knowing a word receptively and productively in the following table.

Table 1.1 *What is involved in knowing a word*

Form	Spoken	R	What does the word sound like?
		P	How is the word pronounced?
	Written	R	What does the word look like?
		P	How is the word written and spelled?
Meaning	Word Parts	R	What parts are recognisable in this word?
		P	What word parts are needed to express the meaning?
	Form and meaning	R	What meaning does this word signal?
		P	What word form can be used to express this meaning?
Use	Concept and referents	R	What is included in the concept?
		P	What items can the concept refer to?
	Associations	R	What other words does this make us think of?
		P	What other words could we use instead of this one?
Use	Grammatical functions	R	In what patterns does the word occur?
		P	In what patterns must we use this word?
	Collocations	R	What words or types of words occur with this one?
		P	What words or types of words must we use with this one?
	Constraints on use (register, frequency ...)	R	Where, when and how often would we expect to meet this word?
		P	Where, when and how often can we use this word?

Note: in column 3, R = receptive knowledge, P = productive knowledge.

It is clear that the requirements for receptive knowledge are easier. Nation (2001) maintains that this assumption can be attributed to the following reasons:

1. amount of knowledge:

Productive knowledge requires learning more spoken and written output patterns, whereas receptive knowledge requires merely recognising the meaning according to the spoken or written forms. That is, productive knowledge requires knowing both the meaning and the spoken and written forms of a word. This means that more time and repeated efforts are needed to learn a word for speaking or writing than to learn it for listening or reading.

2. practice:

Native speakers and L2 learners practise receptive knowledge more than they practise productive knowledge. This makes receptive knowledge stronger inside one's memory as a result of continuous practice and use.

3. accessibility:

In their receptive use of L2 vocabulary, L2 learners translate from L2 to their L1 and reverse this direction when they use L2 productively. Consequently, Nation argues, receptive use is easier since L2 learners are more competent in their L1.

4. motivation:

L2 learners may not be motivated to learn the requirements of productive knowledge of some language expressions or forms because they are not motivated to use them (e.g. taboo expressions, slang words, expressions from other dialects, expressions from different sociocultural backgrounds, specialised language for a specific field, etc.).

5. nature of production:

The need to use L2 productively follows the need to express an idea. This idea might be to explain something, convince someone of something, ask about something, etc. Here, a number of processes arise at the same time within the mind.

6. senses used:

Receptive use of L2 requires using the senses of listening and/or seeing.

Productive use, on the other hand, requires using more senses.

According to these requirements, assumptions and characteristics of L2 word knowledge, it can be fairly said that learning L2 vocabulary is not as easy as might be expected. It is a long, demanding process which requires careful planning and diverse use of both explicit and implicit VLSs.

2.2.1.2 Facts Concerning L2 Vocabulary Size

As far as L2 vocabulary is concerned, L2 learners may need to learn some facts about L2 vocabulary. In this respect, Nation and Waring (1997) consider the following questions:

1. the number of words in the L2 that learners intend to learn,
2. the number of words known by native speakers of that L2 , and
3. the number of words that learners need in order to use that L2.

It is important for a L2 learner to be aware of the fact that even native speakers of any language do not know all the vocabulary of their native language, especially so-called specialised vocabulary. What is included in standard dictionaries is, of course, beyond the aims of first and second language learners. Nation (2001) takes *Webster's Third New International Dictionary* as an example. This dictionary

includes more than 114,000 word families excluding proper nouns¹. A word family is a base word with its inflections and derivatives (e.g. *stimulate*, *stimulated*, *stimulates*, *stimulating*, *stimulation*, *stimulant* and *stimulative*) (Schmitt and McCarthy, 1997). Nation asserts that a native speaker of English does not know all these word families. Experimental studies on word families known by native speakers of English (e.g. Goulden, Nation and Read, 1990; Zechmeister, Chronic, Cull, D'Anna and Healy, 1995) estimate that native speakers of English know about 20,000 word families (proper nouns are not included). Based on this figure, Nation assumes that native speakers of English add on about one thousand word families every year during their early stages of language acquisition. Nagy, Anderson, and Herman (1987; cited in Gu, 2003) also estimate that children have an average vocabulary growth of one thousand words per year. Nagy and Herman (1987) estimate that a typical high school native English speaking student has a vocabulary store of about 40,000 words (an average of 3,000 words being acquired per year).

It can be suggested then that a learner of English will need to learn an average of more than 3,000 words per year in order to have a native-like vocabulary store. It is psychologically important for L2 learners to realize these facts about L1 speakers' lexical knowledge. This large number can be acquired by a L2 learner only after tremendous efforts. L1 speakers take about ten years to acquire the grammatical structures of their language, while they continue throughout their lifetimes to develop their lexical store (Schmitt, 2000). The psychological and pedagogical implication of these figures is that it is extremely difficult for a L2 learner to acquire the enormous number of English words known by native speakers, which means that the process of learning and acquiring English lexis by foreign learners is far more complicated than

¹ Nation and Waring (1997) report that Dupuy (1974) and Goulden, Nation and Read (1990) found that this dictionary, when compound words, archaic words, abbreviations, proper names, alternative spellings, and dialect forms are excluded, includes around 54,000 word families.

usually imagined. L2 vocabulary learning should then be looked at as a process of an incremental nature where receptive knowledge precedes productive knowledge and where the former is far more developed than the latter (*ibid.*).

It is important for a L2 learner to set his/her own targets for learning a L2 so that these targets become the basis for learning the vocabulary for that L2. As for the number of word families that a L2 learner needs to use receptively and productively, as we said earlier, the studies conducted on vocabulary stores of native speakers of English indicate the need to learn a large number of word families, bearing in mind both the long period during which native speakers acquire their L1 lexis and the need to establish a number of criteria for selecting the words that should be focused on and the strategies that can help in dealing with unknown words. Nation (2001) suggests that the focus should be first on high frequency words, academic words, technical words, and finally learning effective strategies for dealing with low-frequency words. High frequency words are small in number but represent a large proportion of spoken and written language uses. Nation (*ibid.*) suggests that the 2,000 most frequent words cover about 80% of the words (about two unknown words in every line) in an academic reading text which he examined in order to calculate text coverage in terms of the different kinds of vocabulary contained. These 2,000 most frequent words are thus the main target of a L2 learner. Academic vocabulary comprises those vocabulary items that L2 learners need for their academic university studies in a specific field. Coxhead (1998) devised the *Academic Word List* which consists of 570 word families excluding the most frequent word families. Coxhead devised this list by collecting the words that have a wide range and reasonable frequency of occurrence (Nation, 2001). Academic words cover about 9% of the running words in the texts examined by Nation. The significance of this type of vocabulary lies in the fact that,

as argued by Nation, when added to the list of the highest frequent words, they allow learners of English a coverage of academic texts of about 78.1% to 86.6% (about one unknown word in every ten lines). Low frequency words, on the other hand, constitute a much larger number of vocabulary items, but represent a small proportion of written and spoken texts. Specialists in the field of learning and teaching English vocabulary suggest two ways to deal with low frequency words. First, they have made use of English lexical corpora studies that grade the frequency of a large number of low frequency words beyond the 2,000 word limit. Lexical corpora studies have allowed researchers to give a more accurate estimation of the word frequency of the less frequent words in English. The following table from Francis and Kucera (1982; cited in Nation and Waring, 1997) shows estimated proportions of text coverage by words of different frequency:

Vocabulary size	Text coverage
1,000	72.0%
2,000	79.7%
3,000	84.0%
4,000	86.8%
5,000	88.7%
6,000	89.9%
15,851	97.8%

Nation and Waring (1997) state that the Brown Corpus is based on over 1,000,000 written running words and that the figures in the table above are for lemmas² and not for word families. Nation and Waring (*ibid.*) argue that L2 learners need a much smaller number of L2 words than the number of words known by native speakers of English, who are estimated to know about 20,000 of the 114,000 word families of English. They suggest that a vocabulary size of 3-5,000 word families would be sufficient for receptive use and a smaller number (about 2-3,000 word families) for

² A lemma is a base word and its inflected forms only.

productive use³. Beyond these ranges, L2 learners are recommended to train in and use the diverse learning and comprehension strategies (Nation, 1990). These strategies include guessing unknown words, analysing unknown words, referring to the dictionary, seeking help from others and ignoring some new words in order to allow for implicit learning from context to take place.

2.2.1.3 Implicit and Explicit L2 Vocabulary Learning

After attaining a reasonable command of their L1, native speakers learn their L1 vocabulary mostly implicitly, though implicit learning might start right from the early stages (Schmitt 2000). The number of words that they might acquire explicitly through the instruction of people living around them is very limited (Carter, 1998; Sternberg, 1987). Despite the fact that previous research on the vocabulary size of native speakers of English provides different estimates according to people's age and level of education, it is generally agreed that the vast majority of words are acquired implicitly and that vocabulary acquisition grows at a fast rate from childhood into the years of formal education and slows down during adult life (Read, 2000). Research has also shown that children learn about 4000-5000 word families before starting school and continue afterwards to build a vocabulary store of about 20,000 word families into their adult life (Nation and Waring, 1997). If the results of research into L1 vocabulary acquisition are applicable to L2 vocabulary acquisition, L2 learners should be trained in learning L2 lexis implicitly according to an extended period of learning (Schmitt 2000; Carter, 1998).

³ It has been found that the minimal vocabulary size needed for university studies in Dutch is 10,000 base words, though earlier studies on Dutch suggested 3,000 or 5,000 base words (Hazenbergh and Hulstijn 1996).

Implicit learning has a critical role to play in developing L2 vocabulary, especially during the advanced stages of learning in which learners are expected to encounter low-frequency words. After reaching a vocabulary level beyond graded material and beginning to deal with the linguistically uncontrolled texts, L2 learners begin to encounter countless infrequent words. It is not economic to explicitly try to learn infrequent words (Parry, 1993). Learners should expand their L2 vocabulary beyond the two thousand or so most frequent words autonomously by learning new words from their contexts with the help of a dictionary (*ibid.*).

While explicit learning focuses mainly on high frequency words which are low in information content, low-frequency words are often important for discourse comprehension (Carter, 1998). In contrast with explicit learning which could be described as fast and more principled, implicit learning is rather slow, more open and more progressive. Read (2000) points out that studies on L1 child vocabulary acquisition show that incidental learning results in small amounts of learning. For example, Nagy, Herman and Anderson (1985 and 1987; cited in Read, 2000) conducted two studies on word acquisition by native-English-speaking school children of unfamiliar words met in a reading text at appropriate levels. The children were not told that they would be tested on vocabulary acquisition after the reading task. It was estimated in the 1985 study that the probability of their incidental vocabulary learning ranged between 10 and 25 %. The 1987 study found that only around 5 % of the unfamiliar words were learnt. Read maintains that the two different results of the two studies were because the test of incidental vocabulary acquisition in the second study was run six days after the reading task whereas in the first study it was run immediately afterwards. With regard to incidental L2 vocabulary learning, Read (2000:46) states that empirical experiments reveal that L2

learners demonstrate ‘*some understanding of a few previously unknown words in the text when they are given a test shortly after they have completed the reading*’. He also says (p. 60):

Even if learners successfully infer the meaning of an unknown word in a reading text, it does not mean that they will necessarily acquire knowledge of the word. ... Logically, one can figure out what a word means for immediate comprehension purposes without retaining any long-term memory of the meaning or even the form of the word, once the reading task is completed.

Implicit learning needs to be well staged. A L2 learner who may decide or be asked to start with implicit learning might encounter many new words, making implicit learning quite useless. In this case, the learner may suffer or develop some negative psychological problems. It is also psychologically important for L2 learners to realise that implicit learning of L2 words by using guessing strategies is a slow, incremental process which takes quite a long time and requires great effort. Sternberg (1987) asserts that learning words from context is not the fastest or most efficient way of learning specific vocabulary. In fact, Sternberg asserts, previous research (e.g. Levin *et al.*, 1982; Pressley *et al.*, 1982b) has proven that the keyword method is more efficient than learning vocabulary from context. Fickering (1982; cited in Carter, 1998) conducted a study on English vocabulary learning by Finnish learners and found that learning words in pairs with L1 translations was more effective than learning words in context. Lawson and Hogben (1996) investigated the relation between using certain strategies and word recall. They informed their subjects that they would be tested in recalling word meanings following a deliberate vocabulary acquisition task. Their results showed that the strategy of using available contextual cues for generating word meanings did not lead to successful word meaning recall. On

the contrary, the strategies of paraphrasing and deliberate mnemonic strategies were associated with successful retention.

Encouraging L2 learners to learn L2 words implicitly is based on the assumption that the vast majority of L1 vocabulary is learnt implicitly. However, some EFL/ESL studies on incidental learning through repeated exposure (mostly on intermediate and advanced learners of English) reveal that incidental vocabulary learning yields poorer results than studies on L1 incidental vocabulary acquisition (Gu, 2003). This can be attributed to learners' inadequate language skills, especially beginning L2 learners, who would find it difficult to benefit from incidental vocabulary learning (*Ibid.*). However, Parry (1993) conducted a longitudinal case study on English vocabulary learning by a Japanese university student who had majored in anthropology and found that the study yielded better results on guessing unknown words than previous studies on L1 vocabulary acquisition, mainly performed with children. Parry relates this to the student's being more experienced and knowledgeable as an adult and to the variety of contexts in which new words are encountered in an academic setting. However, Parry also found understanding a new word quite well in context does not mean that that word is learnt in the sense that it can be individually defined. Parry acknowledges that though a guess may seem to be generally correct, it is merely an approximation of the exact meaning of the new word and that even when a learner makes a correct guess, this does not guarantee that the new word will be retained in long-term memory. Therefore, Parry suggests that several encounters in different informative contexts are necessary for the gradual nature of L2 vocabulary learning.

Some scholars consider guessing the meaning of unknown words from context merely a communication strategy which is unlikely to lead to learning, because such

guessing is basically used to work out the meaning and the form of the message (Tarone, 1983). Lawson and Hogben (1996) state that researchers into learning vocabulary from context do not always differentiate comprehension of word meaning in context from learning and retaining it in long-term memory. They continue (p. 105):

Comprehension of the meaning of a new word in context might involve no more than generation of a meaning that suggests a coherent interpretation of the sentence or passage. No additional, deliberate analysis of the features of the word or the word-meaning complex need be undertaken at this time.

They also say (p. 131):

Generating a possible meaning for an unknown word by using contextual cues can lead to development of a suitable representation of the sentence or passage of text. The reader may therefore be able to comprehend the sentence or text. Although this comprehension purpose can be seen as distinct from the case where the reader interrupts the comprehension exercise to employ a deliberate vocabulary acquisition procedure with an unknown word, the former case will not necessarily preclude that vocabulary acquisition.

Haastrup (1991; cited in Lawson and Hogben, 1996) also regards inferring word meaning as a comprehension procedure which does not necessarily result in vocabulary learning. Studies on learning from guessing unknown L2 words focus mainly on how soon learning occurred after a reading activity. Nation reports that Swanborn and de Glopper (1999) conducted 20 empirical studies on L1 vocabulary learning through guessing. They reported that their subjects learnt only 15% of the unknown words that they met in written texts. The unknown words represented no more than 3% of the running words in the written text given to their subjects.

Accordingly, Nation argues, L2 learners who can be said to have a much smaller L2 vocabulary store may learn less than 15% of the new words that they encounter by merely guessing them. Nation (*ibid.*) points out that when a new word is encountered by a learner the learner may guess the word correctly to some degree and eventually learn its meaning. He also asserts, however, that this occurs with only about 5-10% of new words, whereas the majority of new words, even if their meaning is guessed correctly to some degree, are not learnt. In other cases, new words are typically either guessed incorrectly or simply ignored.

Horst, Cobb and Meara (1998; cited in Nation, 2001) report that only 20% of new words are learned in context by L2 learners, bringing into consideration that (1) the text that the subjects of the study read were long simplified readers, (2) the number of new words was controlled, (3) the topics of the texts were familiar to the subjects of the study, and (4) the subjects' attention was drawn to the strategy of guessing unknown words. This study suggests that learning new L2 words by guessing their meaning from context is less likely to take place if L2 learners read natural texts and are under no pressure to guess unknown words. On the basis that empirical studies show that L2 vocabulary learning through guessing is limited, Nation suggests taking the following points into consideration when training L2 learners in guessing strategies:

1. Implicit learning of L2 vocabulary is only one of many other VLSs.
2. Learning L2 vocabulary is a cumulative process. The more encounters a learner has with a new word the more he/she adds to his/her knowledge about that word. Therefore, L2 learners should be advised to do a lot of reading on topics which interest them. This will allow them to encounter the same new words repeatedly and consolidate already known ones.

3. Explicit learning of L2 vocabulary is necessary for L2 learners because it widens their vocabulary store quickly and efficiently. Implicit learning should be based on and supported by direct, decontextualised learning.

Sternberg (1987) also maintains that learning vocabulary from context is central to everyday vocabulary learning and that training students in the processing cues and moderating variables of contextual learning can help them develop better techniques to cope with unknown words. Nation (2001) advocates a positive view of the limited implicit learning of L2 vocabulary, because it is not possible to learn the different aspects of a word meaning from one context. Therefore, flexibility in dealing with a word meaning on the first encounter is necessary. In other words, the implicit learning of a word meaning from a single first encounter should undergo continuous revisions. L2 learners should take into consideration that implicit learning of L2 words through guessing might not be 100% correct. Vocabulary learning is a cumulative process in which a learner needs to encounter an unknown word a number of times in order to eliminate guessing in each encounter until it is possible to achieve a near-100% understanding. Nation (*Ibid*: 236) says:

The findings from the few reasonably well conducted studies of guessing by non-native speakers have not shown large amounts of successful guessing and learning from guessing. This may be partly due to poor design, but it is also the effect of the cumulative nature of such learning involving only small gains per meeting for most words. 'What proportion of unknown words can be guessed from context?' is probably not the right question. It should be 'Is it possible to use context to keep adding small amounts of information about words that are not yet fully known?' The answer to this question is clearly 'Yes'.

Hence, good language learners, Nation maintains, manipulate the strategy of guessing in an analytic process. They first learn a word meaning by choosing an initial model of the word meaning and then use any additional information (through subsequent encounters) to refine the initial model.

Schmitt (2000), however, claims that L2 learners do not learn L2 vocabulary (and other language elements) unless they consciously notice them. Noticing, according to Nation (2001), is the first of three successive processes of learning L2 words: (1) noticing, (2) retrieval and (3) creative use. Noticing refers to recognising a new word and deciding that it is a useful word to deal with. The effectiveness of this process depends on how successful the learner is in assessing a new word as important or useful. Nation (*ibid.*) thus asserts the importance of both motivation and noticing in order to facilitate the condition of learning. Similarly, Ellis (1997; cited in Read, 2000) argues that while the semantic features of L2 words are learnt consciously, word forms and collocations are mostly learnt unconsciously. Ellis (1994) argues that to gain vocabulary knowledge in both breadth and depth requires more conscious and explicit learning techniques.

Moreover, Huckin and Coady (1999; cited in Gu, 2003) maintain that though it is important for L2 vocabulary building, especially for advanced learners, incidental learning through guessing requires, among other things, a great deal of prior training in basic vocabulary. Some scholars (e.g. Coady, 1997; Laufer, 1997; Meara, 1997; Nation and Newton, 1997; Carter, 1998; Nation, 1990, 1997, 2001) call for explicit learning of the most frequent L2 words at the early stages of learning, arguing that the less frequent vocabulary is best learnt implicitly at the advanced stages. Read (2000) acknowledges that though the communicative approach does not advocate memorising discrete vocabulary items in word lists or word cards, explicit vocabulary

learning is important for building up the basic vocabulary needed to commence the process of implicit vocabulary learning. L2 beginning learners cannot learn L2 vocabulary implicitly through extensive reading and listening activities if they do not have a sufficient L2 vocabulary store. Cohen and Aphek (1980; cited in Carter, 1998) found that recalling words in context is positively related to the informants' proficiency level, with more advanced learners being more likely to benefit from learning words in context. Nation and Waring (1997) and Nation (1990) suggest that L2 learners need to learn the basic 3,000 word families in the beginning stages in order to be able to develop effective strategies to comprehend and learn low-frequency L2 vocabulary implicitly. Similarly, Nation (2001) suggests that the focus should move respectively from high frequency words to academic words, then technical words, and finally learning effective strategies for dealing with low-frequency words.

Explicit vocabulary learning is part of metacognitive learning. Rubin (1987) points out that metacognitive strategies refer to general plans and goals set by learners which include planning, prioritising, setting goals and objectives, and self-management. Explicit learning through word lists, word cards and other means can reflect effective planning. Prioritising can also be implemented through explicitly learning the more frequent words before training in using guessing and skipping skills. The same applies to Oxford's (1990) interpretation of metacognitive strategies as the strategies which allow learners to coordinate language processes by using functions such as centring, arranging, planning and evaluating. Explicit vocabulary learning can be managed through focusing on certain types of vocabulary (e.g. frequent words, academic words). Building up the required vocabulary is one of Oxford's centring strategies. Arranging and planning is also important in explicit

vocabulary learning. Each proficiency level requires certain types of VLSs. Nation's (2001) planning strategies include, among other language aspects, choosing the most effective type of words that can achieve the aim of learning a L2. Likewise, Nation and Waring (1997) assert that there should be clear, sensible goals for L2 vocabulary learning and that words which have the advantage of being frequently met deserve to be a priority target for L2 learners. In the current study therefore, the strategy of building up a sufficient vocabulary store will be considered a metacognitive strategy.

A final point to draw attention to is that explicit and implicit learning should not be seen as having a totally exclusive relationship. Carter (1998: 204) states that *'[r]ecent vocabulary-acquisition research suggests strongly, however, that it is preferable to think in terms of continua from explicit to implicit and from implicit to explicit, and to continue to direct research at points along such continua.'* Recent studies on second language learners show that a combined approach is superior to incidental vocabulary learning alone (Laufer & Hulstijn, 2001; Zimmerman, 1994; Nation, 2001; Schmitt, 2000; Parry, 1991, 1993 and, 1997; Knight, 1994). Nation and Waring (1997) and Read (2000) suggest that vocabulary learning should involve a complementary relationship between contextualised (implicit) and decontextualised (explicit) learning. Fraser (1999; cited in Nation, 2001) and Hosenfeld (1977; cited in Scholfield, 1997) suggest that implicit learning of L2 words can be effective if guessing a new word is immediately followed by consulting a dictionary. Nation (2001) also recommends that it would always be better after trying to guess the meaning of a new word to consult a dictionary. Luppescu and Day (1993) conducted a study on the effect of using bilingual dictionaries while reading on vocabulary learning by 293 Japanese university students studying English as a foreign language. They found that in a vocabulary test the students who used a bilingual dictionary

significantly outperformed students who did not use one. However, they also found that the students who used a dictionary were slower readers (with a reading speed of almost half that of the students who did not use a dictionary). Rodríguez and Sadoski (2000) found that using the context/keyword method produced better results for word recall (either immediately or after one week) than using rote rehearsal, context or keyword alone. Similarly, Knight (1994; cited in Gu, 2003) found that L2 learners who used a dictionary while reading and guessed through context learned and remembered more words after two weeks than those who used contextual guessing only. Chin (1999) explored the effects of three VLSs (context only, word form analysis only and combined context-word form analysis) on eighty-five low level EFL readers. The subjects were divided into three treatment groups and underwent both fill-in and multiple-choice tests immediately after instruction. The fill-in test results reveal that the combined treatment group significantly outperformed the word-form analysis group, but it did not significantly outperform the context treatment group. The results of the multiple-choice test, however, revealed no significant treatment effect. Chin also found that her subjects throughout the three treatment groups generally performed better on the multiple-choice test (receptive use) than on the fill-in test (productive use).

Lawson and Hogben (1996) acknowledge that it is difficult to draw precise lines to suggest when a learner should stop using the more explicit VLSs and start learning words in context. Therefore, a mixture of both approaches to L2 vocabulary learning should be implemented (Carter, 1998). Jones (1995:108) says:

An important enabling goal would seem to be to reach a threshold beyond which a range of target-language texts can be read or listened to with relative ease. Beyond this point, texts of interest to the learner can both provide intrinsic motivation and reinforce (or

even extend) formally learnt input ... On the other hand, studial strategies appear still to play an important role in ensuring steady vocabulary expansion beyond the real-text threshold.

2.2.2 Taxonomies of VLSs

This section will discuss the VLSs taxonomies of Schmitt (1997) and Nation (2001), because these two taxonomies are particularly important to the current study. Schmitt's taxonomy of VLSs can be considered the most comprehensive. In addition, Schmitt conducted an empirical study on Japanese EFL learners' use and evaluation of VLSs. Both the taxonomy and the study of Schmitt can be rightly seen as a very important reference for the current study whose subjects are also EFL learners. Likewise, Nation's taxonomy is important to the current study because it gives more importance to direct learning of L2 vocabulary. In fact, the current study draws largely on Nation's discussions and suggestions as regards explicit and implicit L2 VLSs.

2.2.2.1 Schmitt's (1997) Taxonomy

Schmitt's taxonomy classifies VLSs into two main types of strategy: discovery and consolidation strategies (see appendix seven). Together the types total 58 individual strategies. As Schmitt notes, his taxonomy is based on different sources. These include: (1) examining a number of reference books and textbooks; (2) asking Japanese intermediate level students to write a report about how they study English vocabulary; (3) then asking their teachers to review the preliminary list and add any other strategies that they thought of; and (4) subsequent reading, introspection and conversations with other teachers. Even so, Schmitt adds the reservation that his taxonomy '*should not be viewed as exhaustive, but rather as a dynamic working*

inventory which suggests the major strategies' (p. 204). In fact, Schmitt also admits that it is difficult to devise the list and assign particular strategies to any of the main categories. He says (p. 204):

In practice, it was quite difficult to decide where to draw the line between different strategies and their numerous variations. For example, classmates could ask each other for translations, paraphrases, examples of the new word in a sentence, a picture illustrating the new word's meaning, etc. If every possible permutation was listed, the list would have soon become too cumbersome to be of any practical use. We attempted to include all major strategies on this list; however it is admitted that the process of deciding which variations to incorporate depended on the author's subjective judgment.

It is thus possible for some strategies to belong to more than one category. The social strategy of interacting with native speakers, for instance, can be used as a discovery strategy, a consolidation strategy and a metacognitive planning strategy.

Schmitt's (1997) taxonomy of VLSs is based on Oxford's (1990) taxonomy of LLSs which groups LLSs into social, memory, cognitive and metacognitive categories (Nation, 2001). Schmitt, however, criticises Oxford's taxonomy for lacking a category that adequately describes the type of strategy that a learner may use in order to work out the meaning of new words without seeking help from someone else. He thus introduces a category which he calls '*Determination Strategies*'. In addition, Schmitt remarks that Oxford's taxonomy includes some strategies (e.g. interacting with native speakers) that can be classified under more than one category depending on the varying purposes for which the strategy may be used in different situations. Moreover, Schmitt questions the categorising of some strategies as either memory or cognitive strategies, especially since the purpose of both categories is to aid word recall through

some form of language manipulation. In order to solve this problem, Schmitt makes use of Purpura's (1994) classification of storing and memory strategies into six types as follows: (a) repeating, (b) using mechanical means, (c) associating, (d) linking with prior knowledge, (e) using imagery and (f) summarising. In his taxonomy, Schmitt considers the strategies that are most similar to types (a) and (b) as cognitive strategies because they involve a lesser amount of mental manipulation than the strategies that are most similar to types (c), (d) and (e) which can be categorised as memory strategies. These strategies involve either arranging mental information together or transforming it in order to make it more memorable.

Schmitt's taxonomy is also based on a distinction between vocabulary activities suggested by Cook and Mayer (1983) and Nation (1990). They divide vocabulary activities into a) the initial discovery of a word's meaning and b) remembering that word once it has been introduced (Schmitt, 1997). Schmitt labels the strategies that serve the first function '*Discovery Strategies*' and those that serve the second '*Consolidating Strategies*'. They are divided into four main categories: social, memory, cognitive and metacognitive strategies.

However, Segler (2001) remarks that Schmitt classifies VLSs along two dimensions. The first classification dimension is based on Oxford's (1990) classification of LLSs into social, memory, cognitive, and metacognitive strategies. In addition to Oxford's four categories, Schmitt introduces the category of determination strategies to account for the discovery of meanings of new words without using social strategies. Segler, however, observes that Schmitt's determination strategies are the same as Oxford's compensation strategies of guessing intelligently in listening and reading. The second classification dimension is based on Nation's (1990)

classification of VLSs into (1) initial discovery of word meanings and (2) remembering (consolidation) strategies.

2.2.2.2 Nation's (2001) Taxonomy

Nation (2001:218) devises a taxonomy for L2 VLSs which is based on three aspects of L2 vocabulary learning: (1) aspects of vocabulary knowledge, (2) sources of vocabulary knowledge, and (3) learning processes. Nation's taxonomy includes three types of strategy. These are strategies for planning vocabulary learning, strategies for finding out information about words (sources), and strategies for establishing knowledge (processes).

The first class of strategies concerns '*deciding on where to focus attention, how to focus the attention, and how often to give attention to the item*' (p. 218). This class includes choosing words, choosing aspects of word knowledge to focus on, choosing strategies, and planning repetition. Choosing words implies deciding the aim of language learning and consequently choosing the most effective type of vocabulary that can achieve this aim. This strategy distinguishes good language learners who benefit from lists of frequent words, academic vocabulary, good dictionaries, etc. (Gu and Johnson, 1996; cited in Nation, 2001). As for the strategy of choosing aspects of word knowledge to focus on, Nation maintains that L2 learners usually focus on word meaning whereas they also need to consider other aspects of word knowledge for both receptive and productive language use. Choosing strategies involves '*choosing the most appropriate strategy from a range of known options and deciding how to pursue the strategy and when to switch to another strategy*' (219). Finally, the strategy of planning repetition entails the use of increasingly spaced retrievals when revising previously studied word lists, word cards, old material, etc.

The second general class of strategies in Nation's taxonomy is finding information about L2 words. Nation proposes four sources as follows: (1) analyzing word parts (affixes and stems), (2) using context, (3) consulting a reference source, and (4) using parallels with other languages.

The third class of VLSs, establishing vocabulary knowledge, focuses on remembering L2 words and making them available for use. They include the following strategies: (1) noticing, (2) retrieving and (3) generating. Noticing requires recognising the word as an item to be learnt. Noticing strategies include putting new words in a vocabulary network, word lists, word cards, semantic grids, etc. Retrieving refers to recalling previously met words. Nation maintains that retrieving can occur across the four language skills (receptive/productive, oral/visual, overt-covert, in context/decontextualised). The difference between noticing and retrieval strategies, Nation remarks, is that the latter involves having *'only a cue and the other information has to be recalled by the learner'*, whereas the former involves providing all the information needed by the learner. Generating strategies, in Nation's words (p. 222), *'include: attaching new aspects of knowledge to what is known through instantiation (visualizing examples of the word), word analysis, semantic mapping, and using scales and grids. It also includes rule-based generation by creating contexts, collocations and sentences containing the word, mnemonic strategies like the keyword technique, and meeting and using the word in new contexts across the four skills of listening, speaking, reading and writing'*.

2.2.3 The Taxonomy of the Current Study

The taxonomy of VLSs used in the questionnaire survey of the current empirical study is based on the LLSs related to L2 vocabulary learning and the more specific VLSs discussed in a number of reference books and previous studies. None of the previously proposed lists of VLSs has been directly used in the current study. Rather the study aims to identify the subjects' use and evaluation of a wide range of VLSs identified in previous studies and relevant literature.

The division of the taxonomy into metacognitive, discovery and consolidation strategies is largely based on Schmitt's classification of VLSs. However, Schmitt's basic categories will undergo some modification as some strategies are deleted, added, and reclassified. In addition to refining Schmitt's taxonomy in these terms, the current taxonomy will differ from Schmitt's in that the metacognitive strategies are seen as an independent type of strategy from the consolidation strategies. This is because metacognitive strategies can, in the wider sense of metacognition, serve purposes beyond that of consolidation. For example, they can be used to build up vocabulary, assist discovery, plan and evaluate vocabulary learning, and increase awareness about VLSs and the nature of L2 vocabulary learning.

2.2.3.1 Metacognitive Strategies

The inclusion of metacognitive strategies in the taxonomy of the current study is generally based on O'Malley *et al's* (1989: 422) argument that metacognitive strategy use involves '*knowing about learning and controlling learning through planning, monitoring and evaluating the learning activity*'.

Metacognitive strategies *'are used by students to control and evaluate their own learning, by having an overview of the learning process in general'* (Schmitt, 1997: 216). Chamot and O'Malley (1994: 272) maintain that:

A key element in self-regulated learning is metacognitive knowledge about one's own learning and strategic processes and about the demands of the task ...Allied to this knowledge is the control of executive processes crucial to learning, which include planning, monitoring, and evaluating the learning task ... Metacognition consists of these two features, understanding or appraisal of one's own thinking, and management of one's own thinking and learning endeavours ... While research in this area is sparse, the available information indicates that metacognition, rather than frequency of learning strategy use, may be the major factor in determining the effectiveness of individuals' attempts to learn another language.

A very important language task is learning a large number of L2 vocabulary items. Oxford (1990) maintains that indirect metacognitive strategies permit language learners to control their cognitive learning through coordinating the process of learning. This can be done through a number of activities such as centring learning by linking new information to already acquired knowledge and paying attention to specific aspects of the language; arranging and planning learning through identifying aims and objectives of learning, organising learning activities, and seeking opportunities for practising the new language; and self-monitoring and self-evaluation.

Ten metacognitive strategies will be investigated in the current study. They cover (1) building up a sufficient English vocabulary store, (2) studying the English word-formation system, (3) maximising exposure to L2 media, (4) learning vocabulary through reading, (5) ignoring some new words, (6) planning vocabulary

revision, (7) evaluating L2 vocabulary knowledge, (8) continuing to study over time, (9) learning about VLSs and about the nature of L2 vocabulary learning, and (10) using social strategies to improve L2 vocabulary knowledge.

2.2.3.1.1 Building up a sufficient vocabulary store

At the beginning stages of learning another language, L2 learners need to do a large amount of explicit learning (Sökmen, 1997; Schmitt, 2000). Nation and Waring (1997) and Jones (1995) point out that the main difficulty of beginning learners is to get to the threshold where they can start to learn new words from context. Nation's (2001) first class of strategies includes choosing words with a focus on the most effective type of vocabulary. Building up a sufficient store of L2 vocabulary in the early stages of learning has a psychological significance. The significance of metacognitive strategies lies in the important role they can play in helping learners overcome the anxiety and confusion of learning, among other language aspects, a large number of vocabulary items (Oxford, 1990). In the case of L2 vocabulary learning, anxiety could result from lacking a sufficient vocabulary size. Hence, in the current taxonomy the strategy of building up a sufficient vocabulary size will be seen as a foundation strategy whose aim is ultimately to enable L2 learners to make use of implicit vocabulary learning through maximising exposure to the different sources of L2. In the first stages, a L2 learner is usually enthusiastic about learning a large number of vocabulary items. Ignoring this psychological need may result in negative consequences from the very early learning stages (Sökmen, 1997). If one of the ultimate goals of employing all direct strategies for learning L2 lexis is to enable a learner to use the strategy of guessing successfully, the direct strategy of building up a reasonable amount of L2 words is an essential step in this regard (Read, 2000). The significance of this strategy derives from the fact that guessing the meaning of a new

word in a certain context (whether spoken or written) depends on eliminating the possible meanings of an unknown word according to both the general contextual cues (the learner's general knowledge of the topic) and the more specific contextual cues (linguistic cues). An unknown word may be correctly guessed only when a high percentage of the words before and after it are well known to the learner. Otherwise, the process of guessing might be quite difficult or even impossible (Sökmen, 1997). This strategy interacts with Oxford's (1990) second set of indirect strategies, namely the affective strategies which help learners regulate emotions, motivation and attitudes. Trying to learn L2 words implicitly before building up a sufficient vocabulary store will be very difficult and most likely to fail. This may result in negative emotional, motivational and attitudinal effects as the learning process becomes more frustrating and disappointing.

Building up a reasonable store of L2 words can be achieved by learning the most frequent words using word lists and word cards. Nation and Waring (1997) suggest that the 3,000 most frequent words should be an immediate high priority before focusing on other vocabulary. They can then move on to using graded readers which can be followed by controlled authentic reading on a specific topic (Nation, 2001). The reason why beginning learners are recommended to start with learning the 3,000 most frequent words, then practise graded reading before commencing controlled reading on a specific topic is that implicit learning is mainly based on inferring meaning from context, and guessing meaning from context is possible only when the number of new words is limited (Schmitt, 2000). L2 learners can successfully benefit from spoken and written texts to widen their L2 vocabulary only if at least 95% of the running words of a text (Liu and Nation, 1985) are known, though Nation (2001) suggests that 98% is more helpful. Knowing less than 95% of

the running words might make the overall comprehension more difficult and consequently discourage implicit learning.

A very important source for direct L2 vocabulary learning is word lists and word cards (Carter, 1998; Nation, 2001). The strategies of using word lists and word cards are classified by Schmitt (1997) as both discovery and metacognitive consolidation strategies. The two strategies, however, will be considered in the current study as (1) metacognitive strategies for building up a sufficient L2 vocabulary store when using published word lists or word cards, as well as (2) note-taking consolidation strategies if they are designed or used by the learner for revision purposes. This modification is based on Schmitt's description of discovery strategies. At the beginning of his section on discovery strategies, Schmitt (p. 208) says that *'[i]f learners do not know a word, they must discover its meaning by guessing from their structural knowledge of the language, guessing from an L1 cognate, guessing from context, using reference materials, or asking someone else'*. The inference is that word lists or word cards are not usually used by L2 learners as reference materials. This is supported by Schmitt himself who suggests that word lists are very useful for initial exposure to new words. That is, they are effective means for discovering new words, not for discovering the meaning of new words. Nation (2001), in addition, discusses these two strategies as strategies for building up a sufficient vocabulary store and note-taking strategies.

Word lists and flash cards are not, however, favoured means for learning L2 vocabulary in the current communicative era which promotes the presentation of words in context (Nation, 1982). Word cards are usually criticized for being a decontextualising technique making it difficult for learners to remember words or use them (Oxford and Crookall, 1990; Nation and Waring, 1997). Oxford and Scarcella

(1994), criticising decontextualised learning of L2 vocabulary through word lists, argue that, despite being suitable for a rote memorisation learning style, giving learners some independence from the teacher and enabling learners to learn a great number of words in a short time, words learnt in word lists (and possibly word cards) are rapidly forgotten. Yet, they acknowledge that a good feature of flash cards is that they can be reorganised and shuffled to apply other organisation techniques. Similarly, some writers consider direct learning from word lists and word cards not useful because such techniques present words out of context, making new words more difficult to learn (Judd, 1978; Turner, 1983; Oxford and Crookall, 1990). They believe that learning words in context helps learners retrieve L2 vocabulary and learn how to put them into actual use. Along these lines, Carter (1987) warns that extensive decontextualised learning of L2 words may weaken the learners' ability to use L2 words in natural discourse. Contrary to proponents of an extreme communicative approach, however, Nation (*ibid.*) points out that some researchers (e.g. Crothers and Suppes, 1967; Bahrick, 1984; Bahrick and Phelps, 1987; Beaton, Gruenberg and Ellis, 1995) have found that it is sometimes possible to retrieve decontextualised L2 words for a long time. The empirical evidence therefore suggests that word lists can be recommended for beginning learners, especially if words are presented in more contextual usage (Nation, 1982). If they are given sufficient repetition, word lists of paired words or paired associations with L2 synonyms or L1 equivalents can be very useful for beginning learners who need to learn large numbers of L2 words (Nation, 1990). Nation (2001) remarks that learning L2 vocabulary from word cards and word lists fulfills at least three of the nine aspects of word knowledge: spelling, concept and relation between form and meaning. In addition, Nation (*ibid.*) suggests that word lists and word cards can include other information such as part of speech, collocations (one

or two), example sentences, synonyms, antonyms, etc. In general, no single strategy is expected to offer L2 learners all aspects of word knowledge needed for both productive and receptive knowledge. Nation (*ibid.*: 300) says that *'any one way of dealing with vocabulary is not efficient in helping learners gain control of all aspects of word knowledge. It is necessary to see learning from context and learning from word cards as complementary ways of learning which overlap and reinforce each other and which also give rise to some different kinds of knowledge.'* In summary, Nation (*ibid.*) justifies his support for using word cards (and possibly word lists) in the following points:

1. The word card strategy can be applied to both high and low frequency words;
2. Direct deliberate learning is faster and stronger than incidental learning;
3. Direct learning can help incidental learning by raising consciousness of particular words and by providing knowledge that can be enriched and strengthened through incidental meaning-focused learning.

In general, Nation and Waring (1997: 17) state that *'[f]requency information provides a rational basis for making sure that learners get the best return for their vocabulary learning effort by ensuring that words studied will be met often. Vocabulary frequency lists which take account of range have an important role to play in curriculum design and in setting learning goals.'* Available computer programmes and very large lexical corpora make devising word lists according to frequency and range much easier and more accurate (*ibid.*).

2.2.3.1.2 Studying the English word-formation system

There are three main ways in which native speakers of English increase their vocabulary: (1) new words are taught, (2) new words are learnt through context, and (3) new words are recognised or built by studying the English affixation system

(Nation, 2001). Research into L1 vocabulary acquisition has proved that L1 speakers acquire many new vocabulary items during their primary school years by linking new words to already known ones through prefixation, suffixation and compounding (Nagy and Anderson 1984; Nagy *et al.*, 1993). It might be therefore argued that a good command of L2 morphology would help in learning L2 vocabulary. Research has also shown that the acquisition of L1 inflections and compounding system precedes the acquisition of L1 derivations and suffixes (Berko, 1958; cited in Schmitt, 2000). Schmitt (2000) suggests that this could be attributed to the fact that (1) compounds and inflections are fixed and rule-based and (2) children are first introduced to compounds and inflections through intensive exposure to oral L1 before they are introduced to written language, which is characterised by frequent use of derivations (cf. Chafe and Danielewicz, 1987; and Taylor and Nagy, 1989). A learner realising that L1 speakers need to spend some years in acquiring an adequate knowledge of their L1 morphology system, despite their intensive daily exposure to both spoken and written language input and output, should develop a positive psychological understanding of L2 vocabulary learning. A L2 learner should realise that taking a long time to learn L2 inflections, compounds and derivations is not a personal weakness, but simply a natural linguistic phenomenon.

The English word formation system includes affixation and compounding (Gairns and Redman, 1986). Affixation is the process of adding a prefix or suffix to the base item. Affixes modify a word meaning and sometimes change parts of speech. Compounding, on the other hand, is the formation of words from two or more separate words. Learning the English system of inflections and derivations can benefit learners in two ways. First, learners can recognise many affixed new words whose stem is known to them. Second, knowledge of affixes can be used by learners in order

to check how successful their contextual guessing is (Nation, 2001). A study of the English word-formation system can complement learning of the most frequent words in English. Carter (1998: 234) points out that '*the high-frequency words in English have more homonyms, inflected and derived forms than low-frequency words*'.

Fortunately, a number of studies have been conducted on the frequency of affixes (e.g. Thorndike, 1941; Stauffer, 1942; Bock, 1948, Becker, Dixon and Anderson-Inman, 1980; all cited in Nation, 2001). These studies on English affixes confirm the frequent occurrence of derivational affixes. In a more recent study, Bauer and Nation (1993) propose seven levels of affixes according to the following four criteria:

1. frequency of affix occurrence,
2. regularity (amount of spelling or pronunciation change to the stem or affix),
3. productivity (possibility of forming new words), and
4. predictability (the number and relative frequency of the different meanings of the affix).

Bauer and Nation's study and other studies indicate that there are more useful and more frequent affixes that learners should be introduced to throughout their learning development. Nation (2001:268) suggests a five-stage sequenced list of derivational affixes for learners of English (see appendix eight).

Nation (*ibid.*) asserts that learners should know that a complex word is made up of parts and that these parts can occur in other words. They should also know what the parts mean and how the meanings of the stem and affix combine to make new but related meanings. However, Nation maintains that learning word parts can be more efficient after the learner acquires a considerable number of complex words as whole

sets and that the process of developing learners' knowledge of word parts should be seen as a long-term process.

2.2.3.1.3 Maximising Exposure to the English media

The strategy of maximising exposure to the English media is an efficient metacognitive vocabulary learning strategy (Schmitt, 1997). Its aim is to give the learners increasing command of the parameters which constitute L2 word knowledge. Knowing all the information about a specific word cannot be guaranteed through encountering that word only once. Hence, the learner needs to encounter a new word in different contexts and at different times (Sökmen, 1997). Coady (1993) suggests that L2 vocabulary learning should copy L1 vocabulary acquisition in that the vast majority of words in L1 are acquired incidentally through extensive and multiple exposures. Simpson (1988; cited in Carter, 1998) claims that an average native speaker is exposed to around one million words of spoken and written English per day. Repeated encounters with L2 words allow learners to meet the most common words and other useful words, consolidate and deepen knowledge of already known words and fulfil the various requirements for full word knowledge (cf. 2.2.1.1). In fact, in an environment of foreign language learning where L2 is not the means of everyday communication, constant exposure to L2 media may compensate for the lack of L2 input.

2.2.3.1.4 Learning vocabulary through reading

Reading is also an effective source for vocabulary learning, especially for EFL learners who find other sources less accessible. Pitts *et al.* (1989) conducted a study in learning L2 vocabulary through reading by adult ESL learners and found that L2 vocabulary learning, as in L1, can be increased to a small but reliable degree through

reading. They therefore suggest that a large amount of comprehensible reading can be an effective source of L2 vocabulary learning. Likewise, Stahl (1990) confirms that there is a strong relation between vocabulary knowledge and reading. This relationship, Nation (2001) maintains, is mutual. That is, reading develops vocabulary knowledge and vocabulary knowledge develops reading skills. In support of this, Nation and Waring (1997) assert that vocabulary knowledge by itself is not enough for language use and that there is a mutual relationship between vocabulary knowledge and language use. That is, language use enriches vocabulary knowledge and vocabulary knowledge enhances language use. Scholfield (1997) points out that L2 vocabulary learning from the intermediate level onwards is most likely to happen incidentally through extensive reading. Huckin and Bloch (1993) state that of the four general skills (speaking, listening, reading and writing), reading is the most important to students enrolling on a second-language academic environment since reading is the primary source of academic knowledge that might be missed in classes or lectures. Reading is also more challenging in terms of linguistic and intellectual processing than other language skills (Chern, 1993). Unlike spoken language, which is characterised by the intensive use of frequent words and lower type-token ratios, written language offers learners a rich source for learning L2 vocabulary (Schmitt, 2000). Reading activities introduce learners to a wide range of topics, allow them to practise language both extensively and intensively and allow better conditions for repetition, future revision, referring to the dictionary, guessing and spending the desired time on the activity. Although implicit learning can be the outcome of constant exposure to L2 through developing any of the four general skills (reading, writing, listening and speaking), Nation and Waring (1997) maintain that research into incidental L2 vocabulary learning reveals that such learning requires the learner

to engage in large amounts of reading (and listening) because incidental learning is small and cumulative. An important aspect of implicit learning is that it becomes a natural process of learning as the requirements of L2 use on the part of the learner increase, especially reading activities (*ibid.*). Constant exposure to written L2 allows learners to repeatedly encounter many frequent and useful words and introduces them to a great deal of infrequent vocabulary that might be rarely used in everyday spoken L2. In addition to helping learners to learn and recycle huge amounts of L2 vocabulary, indirect vocabulary learning through extensive reading is one way to deepen the knowledge of already known words (*ibid.*).

The importance of vocabulary in L2 reading is underlined by the fact that lack of vocabulary knowledge has been found the biggest problem for second-language readers (Laufer and Sim, 1985; Ulijn, 1981; Alderson, 1984). Wittrock *et al.* (1975; cited in Luppescu and Day, 1993) found that a sentence or even a whole text could be incomprehensible because of a single unknown word.

However, for reading to aid vocabulary learning, the learner should have a vocabulary store sufficient to make implicit learning and comprehension of new words possible. Moreover, constant reading is necessary. Research suggests that reading has little effect on vocabulary knowledge unless large quantities of comprehensible texts are read (Nation, 2001). The texts should be carefully staged. Beginning and intermediate level learners can start with simplified readers. As their proficiency levels progress, they can move on to controlled reading (authentic texts on specific topic/s) before they start free reading (*ibid.*).

With regard to the minimum vocabulary store required for learning vocabulary from reading, Laufer's (1989; cited in Nation, 2001) studies on the relationship between L2 vocabulary knowledge and reading comprehension suggest

that a level of 3,000 word families is a reasonable basis for L2 learners to commence reading unsimplified authentic texts. Hirsh and Nation (1992) suggest that for reading in L2 to be an enjoyable activity, 98-99% coverage of word tokens is needed. Nation (2001) finds that 95% coverage of academic texts would require learning about 4,000 word families (2,000 high-frequency general-service words and 570 general academic words [the Academic Word List] + 1,000 or more technical words + proper nouns and low frequency words). The view that having 98% coverage is required for pleasurable reading and 95% for reasonable comprehension has also been echoed by Hu and Nation (2000).

After or during the process of explicitly building up the minimum vocabulary store for reading, learners can benefit from both intensive and extensive reading (Nation, 2001). Intensive reading involves a deliberate close study of texts (300-500 words long), and requires the learner to focus on vocabulary, grammar and discourse of text. Nation considers this type of reading a language-focused learning. It can be argued that this type of reading may result in more vocabulary learning than extensive reading (Hulstijn, 1988; cited in Nation, 2001). On the other hand, the focus in extensive reading is on the meaning of the text. With regard to L2 vocabulary learning, Nation (2001) maintains that there are two types of extensive reading: (1) one which aims at vocabulary growth, and (2) one which aims at fluency development. Developing L2 fluency through extensive reading requires learners to read texts that have no or little unknown vocabulary, because new words will hinder speed of reading and consequently make reading less interesting. Therefore, Nation asserts, extensive reading can be very useful when reading large quantities of written texts at an appropriate level. Nation justifies his recommendation of extensive reading on the grounds that because learners usually have different proficiency levels,

extensive reading allows each individual learner to choose reading material suited to his/her own level and consequently motivates him/her to continue learning inside and outside the teaching setting. Learners will, of course, need to be informed about the types of reading available and be introduced to the reading material that can best improve their vocabulary. Graded readers are a good resource for developing depth of vocabulary knowledge, because the basis of such readers is recycling frequent words and it is unlikely that new words will be met (Nation, 2001). Graded readers are usually simplified works of famous novels. They are classified into gradually advancing levels according to successive levels of word frequency, with each level being introduced according to a strictly limited frequent vocabulary (*ibid*). Graded reading is one of the techniques in Naiman *et al.*'s (1978) taxonomy of LLSs which refers to reading familiar topics and reading texts at the beginners' level. The first work which reflects the vocabulary-control movement was Michael West's *A General Service List of English Words* (GSL) in 1953, which includes 2,000 words drawn from a corpus of 2-5 million words (Carter, 1998). West's contribution to this movement is also apparent through his *New Method Dictionary* in 1935 and *Minimum Adequate Vocabulary* in 1960, in which he applied the concept of controlled defining vocabulary in dictionary definitions. In these two works, West used 1,490 words to define the meanings of 24,000 entries. Some recent dictionaries (e.g. *Longman Dictionary of Contemporary English*, 1978-present) still apply West's concept of controlled defining vocabulary (Carter, 1998). West also applied the concept of controlled vocabulary to his *New Method Readers* in 1960, which he designed for L2 learners.

Recent computer lexical corpora of authentic texts make it possible for researchers to determine actual word patterns, multiword units and more precise

frequency information from (Gu, 2003). Graded readers are based on such corpora. This makes graded readers useful means for L2 learners to learn frequent words, reinforce known words and *'provide motivation to continue study through success in use'* (Nation, 2001:163). Graded readers have undergone continuous revision by some specialists in the field (e.g. Bamford, 1984; Hill and Thomas, 1988a, 1988b, 1989; Thomas and Hill, 1993; Hill, 1997; all cited in Nation, 2001) with special consideration of the length of texts, illustrations, degree of vocabulary and grammatical control, number of levels, accompanying exercises, subject matter and interest (*ibid.*). Green and Oxford (1995) found that the strategy of reading interesting material greatly benefited L2 proficiency. Learners can benefit from extensive reading since it is a meaning-focused activity at an appropriate level by incidentally acquiring small amounts of vocabulary. Nation (2001: 155) says: *'... the most important finding from first language studies is that this vocabulary learning [from reading] is not an all-or-nothing piece of learning for any particular word, but that it is a gradual process of one meeting with a word adding to or strengthening the small amounts of knowledge gained from previous meetings.'* Since the amount of learning of L2 vocabulary from extensive reading is small, it is necessary for the learner to reinforce it by further encounters. This can be achieved by meeting the condition of reading large amounts of comprehensible texts. Research on extensive reading has shown that learners can gain effective benefits in developing both their reading skills and their vocabulary store. This, in turn, makes language learning more interesting and more valuable as learners do large amounts of reading at a suitable level.

Where extensive reading specifically aims at vocabulary growth, Carver (1994) states that easy reading will not be useful for L2 learners if they plan to increase the breadth of their vocabulary knowledge. Thus, beginning and intermediate

level learners can benefit from graded readers at slightly higher levels than their norm. More advanced learners are recommended to read carefully staged authentic texts. When authentic texts are first used, they should focus on a single topic, because the topic-specific vocabulary will be repeated throughout a number of texts, allowing learners to consolidate recently learnt words and meet new words in different contexts. Hwang and Nation (1989) believe that authentic texts in newspapers are a rich source for dynamic vocabulary and an invaluable resource for constant coverage of the same topics. Reading materials that are designed especially for younger native speakers can also be suggested for L2 learners as a reading stage that can follow the stage of graded readers. Though such material is not often based on frequency data, it usually contains a large proportion of frequent words. It is a good means of recycling and enlarging knowledge of vocabulary previously learnt and meeting more new words that can be safely guessed (Nation, 2001).

2.2.3.1.5 Ignoring some new words

Bearing in mind the estimated number of words known by native speakers of English and the much smaller number of words needed by ESL/EFL learners, it is then very important for language learners to realise that ignoring unimportant words while reading is not seen as a bad strategy, as learners are not required to learn all the L2 vocabulary that they meet (Goulden, Nation and Read, 1990). The ability to distinguish between useful and less useful vocabulary is a very important metacognitive strategy (Read, 2000). Successful ignoring depends principally on carefully deciding how important a word is for understanding the text in hand.

2.2.3.1.6 Planning vocabulary revision

Reviewing well through spaced intervals is the third main memory strategy in Oxford's classification. Both of the two types of memory (short-term and long-term) play a major role in L2 vocabulary learning. Given that L2 vocabulary acquisition is of an incremental nature, forgetting L2 vocabulary constitutes a continuous problem for L2 learners, especially with receptive vocabulary (Schmitt, 2000). The reason for forgetting L2 words might be scarcity, or lack, of productive use of L2, or stopping language study for a vacation or forever. Schmitt (2000) asserts that L2 vocabulary is probably the most forgettable aspect of L2 language compared to its grammatical structure or phonology. This is because grammar and phonology are rule-based, although there are fixed patterns in L2 lexis. There are some types of words that could be more prone to being forgotten, such as the low frequency words that have no equivalents in L1 (Weltens and Grendel, 1993). In fact, L2 learners who spend a relatively long time (e.g. more than three years) in learning a L2 usually forget L2 words during the first and second years of studying; and later on, the rate of forgetting decreases (Weltens, Van Els and Shils, 1989; cited in Schmitt, 2000). To solve the problem of forgetting L2 words, some researchers suggest that there should be expanded rehearsals for learnt words which are based on revising new words shortly after initial meetings and gradually increasing the intervals (Pimsleur, 1967; Baddeley, 1990; both cited in Schmitt, 1997). For example, a set of new words could be revised ten minutes after the first encounter, and then after one day, one week, one month and after six months. This means that a L2 learner should have a well-organised system of revision in terms of time and number of words. The learner should also assess his/her revision intervals (time difference between intervals) and make necessary changes to the timing of revisions. In general, the longer the intervals

the less likely is the learner to forget. Nation (1990) believes that a learner needs to encounter a new word 5-16 times in order to acquire it. In addition, Cuddy and Jacoby (1982; cited in Nakamura, 2000) argue that greater variability in encoding by presenting an item in a later revision in a different way from its earlier presentation will enhance retention performance, because this will increase the retrieval routes of that item. Variability of contexts in which multiple occurrences of the unknown word appear is also more likely to provide different types of information about the unknown word.

2.2.3.1.7 Evaluating L2 vocabulary knowledge

Evaluating L2 vocabulary knowledge gives indications as to an effective choice of strategy (Schmitt, 1997). That is, a learner can decide which type of VLSs he/she should focus on according to his/her vocabulary knowledge assessment. Naiman *et al.* (1978) found that monitoring L2 performance is one of the main strategies used by successful learners. Monitoring vocabulary improvement is, of course, an important aspect of L2 performance. Oxford (1990) also counts the strategy of evaluating L2 learning through self-monitoring and self-evaluation as a metacognitive strategy.

In fact, in the literature the assessment of vocabulary size and knowledge is always discussed from the perspectives of validation and design on the part of teachers (e.g. Read, 2000; Nation, 1983, 1990, 1993; Schmitt, 2000; Laufer and Nation, 1999; among others). That is, it is the teachers' task (not the learner's) to design and use vocabulary tests to accurately evaluate their students' L2 vocabulary size and knowledge. However, in the light of the characteristics of LLSs (cf. 2.1.2), this strategy is an example of how teachers' role in strategy use and training is extended, because learners are not usually knowledgeable enough about effective

types of evaluation tests. It is often difficult for learners to monitor their progress because learning a language is a long-term process and because learners are not aware of the available ways of monitoring their progress (Nation, 2001). Therefore, learners need to be introduced by teachers to some published vocabulary tests such as the vocabulary sections in published TOEFL and IELTS sample tests. Learners can also assess their vocabulary store by going through word lists of the most frequent words at different levels (e.g. the 3,000 most frequent words and beyond). Scholfield (1997) states that some learners attempt to learn from the dictionary. One way of doing this could be through assessing one's vocabulary store in those monolingual dictionaries that indicate the range of the most frequent words in English being within the 1,000, 2,000 or 3,000 most frequent words (e.g. *Longman Dictionary of Contemporary English*, 2003). Learners can also refer to the defining vocabulary (about 2,000 frequent words) used in some recent dictionaries and usually listed in a separate appendix at the end of the dictionary. The purpose of the defining vocabulary is to offer a limited vocabulary store within which all dictionary entries are defined.

2.2.3.1.8 Continuing to study L2 vocabulary

Vocabulary learning is a cumulative process (Nation, 1982) which requires continuous learning of L2 vocabulary. This strategy is, in fact, related to the main principle of LLSs, autonomy. One of the eight principles of vocabulary learning suggested by Nation (2001) involving the knowledge and skills that L2 learners need in order to be autonomous learners is that learners should continue to increase their vocabulary size and to enrich the word stock that they already know. Schmitt's (1997) discussion of metacognitive strategies also includes this strategy. The principle of continuous learning of L2 vocabulary is important for a number of reasons. First, given that native speakers develop their vocabulary knowledge throughout their life

and that L2 learners need to learn the different requirements of learning L2 vocabulary (cf. 2.1.1), learning such a large number of words requires a long process of learning inside and outside the classroom (Schmitt, 2000). Second, L2 vocabulary learning should be an incremental process because it is almost impossible for a L2 learner to acquire all aspects of L2 vocabulary knowledge in a short time (cf. 2.2.1.1). Carrel (1984; cited in Chin, 1999) maintains that vocabulary learning requires encountering a word repeatedly in different contexts.

Carter (1998) asserts that since there are several aspects of word knowledge and a number of factors affecting word knowledge, L2 learners need to employ different VLSs and continue to learn L2 words for a long time. He suggests that, in addition to building up the basic 2,000-3,000 frequent and useful words, L2 learners should increase their vocabulary size by 1,000 words per year so that they can match the vocabulary growth of native speakers of the L2. It is important for L2 learners in general and English majors in particular to continue to study L2 words for two reasons. First, as we said earlier, it is impossible to learn the different requirements of L2 vocabulary knowledge in a short time. Second, if a learner is expected in academic settings and work conditions afterwards to have a native-like command of L2 vocabulary, he/she needs to achieve the target of 15-20,000 word families estimated by Nation and Waring (1997) to be known by an average native-speaking adult.

However, according to the researcher's experience as a learner and a teacher of EFL, even relatively weak L2 learners may find their vocabulary knowledge quite satisfactory in terms of academic achievements (i.e. course credits). That is, learners are deceived by their academic achievements in assessment tests of the course modules which may not give accurate assessment of one's real proficiency in L2. Oxford (1990:137) says that '*confusion about overall progress is made worse by the*

academic grading system, which generally rewards discrete-point rule-learning rather than communicative competence. These problems unrealistic monitoring of errors and inadequate evaluation of progress can be ameliorated by using the metacognitive strategies of self-monitoring and self-evaluating'. Advanced learners might feel that they have reached the ceiling of their learning needs (Marton, 1977). Al-Fuhaid (2000) found that some advanced Saudi postgraduate students in the UK were no longer interested in improving their vocabulary beyond their academic needs. This was in spite of their several attempts to follow carefully planned programmes in order to develop their English vocabulary in areas where they realised that they had an overall proficiency problem.

2.2.3.1.9 Learning about VLSs and about the nature of L2 vocabulary learning

Since L2 learners' use of LLSs and VLSs is an autonomous matter which depends on learners' interests and a number of learner-dependent factors affecting strategy use, it is necessary for L2 learners to learn about the requirements and benefits of each individual strategy and the factors affecting its use in order to choose for themselves the most suitable types of strategy and use each one more successfully. White (1995) asserts that autonomous L2 vocabulary learning requires understanding of the nature of language learning and developing awareness of a useful set of LLSs. The discussions of VLSs in the literature show a clear need for learners to have good background knowledge about strategy use and strategy effectiveness in terms of the requirements of L2 vocabulary knowledge and knowledge about L2 vocabulary size. Learning about LLSs in general and VLSs in particular is in line with Naiman *et al.*'s (1978) strategy of management of effective strategies as one of the main strategies used by their successful learners. Effective management of strategies is possible only

if adequate knowledge about the strategies themselves exists. Wenden (1987: 6-7; cited in Kouraogo, 1993) relates LLSs to three aspects: (1) language learning behaviours that learners actually engage in to learn and regulate the learning of a second language, (2) what learners know about the strategies they use and (3) what they know about aspects of their language learning (e.g. L2 vocabulary size, requirements of L2 word knowledge). In addition, anxiety vis-à-vis learning L2 vocabulary can be addressed by developing some knowledge about the nature of English vocabulary and how native speakers acquire their L1 vocabulary (cf. 2.2.1).

Nation (2001) asserts that autonomous learning should be seen as depending on three factors: attitude, awareness and capability. Attitudes, Nation affirms, are the most crucial and the hardest aspect of autonomy. This is because even if learners are aware of what they should do and that they are not learning efficiently, they are reluctant to make the necessary change (Moir, 1996; cited in Nation, *ibid.*). Awareness refers to the learner's understanding and evaluation of the learning approaches being taken, so that a more accurate strategy assessment can be achieved. Knowledge about learning strategies is essential, because successful autonomous learning requires metacognitive awareness on the part of learners. Nation (*ibid.*: 219) considers 'choosing strategies' which involves '*choosing the most appropriate strategy from a range of strategies and deciding how to pursue the strategy and when to switch to another strategy*' an essential strategy. Capability, the third factor, is a learner's needs to possess the required skills and knowledge to be autonomous in a particular area of study. Nation proceeds by suggesting eight principles for possessing the knowledge and skills needed to be an autonomous vocabulary learner. These eight principles obviously require significant metacognitive awareness of VLSs. They are as follows (*ibid.*: 395-403):

1. Learners should know what vocabulary to learn, what to learn about it, how to learn it, how to put it to use and how to see how well it has been learned and used;
2. Learners should continue to increase their vocabulary size and enrich the words they already know;
3. Learners should use word frequency and personal need to determine what vocabulary should be learnt;
4. Learners should be aware of what is involved in knowing a word and should be able to find that information about particular words;
5. Learners should be familiar with the generalisable language systems that lie behind vocabulary use;
6. Learners should know how to make the most effective use of direct, decontextualised learning procedures;
7. Vocabulary learning needs to operate across the four strands of meaning-focused input, language-focused learning, meaning-focus output and fluency development; and
8. Learners should be aware of, and excited by, their progress in vocabulary learning.

These principles are generally in line with the three sets of Oxford's (1990) metacognitive strategies: 'centring your learning', 'arranging and planning your learning', and 'evaluating your learning'. Building up the needed vocabulary is one of the 'centring your learning' strategies. Arranging and planning your learning refers to, among other strategies, finding out about language learning, organising, setting goals and objectives and identifying the purpose of a language task. The first strategy in this set requires *'making efforts to find out how language learning works by reading books*

and talking with other people, and then using this information to help improve one's own language learning' (ibid: 139).

2.2.3.1.10 Social strategies

Social strategies are very flexible in terms of achieving more than one goal in learning L2 vocabulary. They include interacting with native speakers of L2, working with a friend or working in groups inside and outside the class and discussing vocabulary learning with teachers. Interacting with native speakers can serve as a metacognitive strategy aiming to maximise exposure to L2 in order to consolidate the knowledge of already learnt words and widen this knowledge by learning more uses and features (e.g. register, word family members) (Hatch and Brown, 1995). In addition, interacting with native speakers of L2 will allow learners to meet the words that these native speakers most frequently use, the different situations in which certain words can be used, the levels of formality of some words, and new ways to express ideas for which learners have limited vocabulary (Eishout-Mohr and Daalen-Kapteijns, 1987). Milton and Meara's (1995) study of 53 advanced European learners of English enrolled at a British university reports that they learned in six months almost five times the average vocabulary size they had learnt in their home countries.

L2 native speakers are usually scarce if the L2 is learnt in the learners' home country. Hence, the strategy of group discussions becomes more valuable. Though it cannot compensate for the advantages of interacting with native speakers, the strategy of group discussions may provide learners with some new meanings of or information about some already known words in addition to learning useful new vocabulary. Empirical studies prove that when L2 vocabulary undergoes elaboration and discussion of meaning and other features, it is learnt better (Nation, 2001). This is because elaboration and discussion take a significant time. The usefulness of

elaboration and discussion is not confined to those who participate in elaboration and discussion, but also extends to learners who observe it. Dansereau (1988; cited in Schmitt, 1997) recommends the strategy of group work as it has the advantages of promoting active processing of information and cross modeling/imitation, encouraging motivation, preparing participants for team work outside the classroom, and allowing more time to use and manipulate L2 in the classroom. Nation (2001) argues that student-student negotiation is better than teacher-student negotiation in terms of quality and quantity, assuming that student-student discussions are usually characterised by more comprehensible definitions, a systematic approach to the task, and the mutual support provided through checking and feedback. However, group discussions take time and allow only a limited number of vocabulary items to be discussed (*ibid.*). As for seeking help from teachers, learners can discuss with their teachers many aspects of L2 vocabulary learning, such as the nature of L2 vocabulary, the vocabulary needed to speak L2, sources of frequent L2 vocabulary, problems of learning L2 vocabulary, etc.

2.2.3.2 Discovery Strategies

Discovery strategies are the actions taken by a learner in order to find out the meaning of a new word. These include using dictionaries, guessing, analysing affixes and roots, analysing pictures or gestures, and seeking help from another person.

2.2.3.2.1 Using dictionaries

Strategies of using a dictionary depend on the purpose for which they are intended. The type of dictionary and the method of using it for receptive language use differ from dictionary use for productive purposes. The former includes looking up a word while listening, reading or translating a text, confirming the meanings of

partially known words, and confirming a guess, whereas the latter includes looking up unknown words for speaking, writing or translation activities in both L1-L2 and L2-L1 dictionaries, checking the pronunciation, meaning, grammar, constraints on use, collocations, inflections and derived forms of partially known words, confirming the spelling, pronunciation, etc. of already known words, checking the existence of a word, looking for a synonym or an antonym of a known word, and correcting an error (Scholfield, 1997; Nation, 2001).

Two steps are necessary in using the dictionary receptively (Nation, 2001):

1. finding the dictionary entry; this step basically requires knowing the alphabetical order, knowing the symbols used in the dictionary for presenting parts of speech, and knowing alternative places for looking up a new word, such as separate entries, sub-entries, word groups, derived forms, etc. ;
2. choosing the correct sub-entry; if the dictionary provides more than one meaning for a word. This depends on how suitable a dictionary suggestion is to the context where the checked word occurs. Even if the dictionary provides a single meaning, the learner may need to modify this meaning by, for example, stretching it or narrowing it down.

In the productive use of the dictionary, both monolingual and bilingual dictionaries (L1↔ L2) can be used. The use of L1-L2 dictionaries can be confusing as the learner will need to select from different L2 translations. Some researchers (Scholfield, 1982 and Stein, 1988; cited in Nation, 2001) recommend using a monolingual dictionary along with a bilingual dictionary in order to double check the information taken from a L2-L1 and L1-L2 dictionary when using the dictionary for productive purposes. Productive use of the dictionary requires a higher proficiency level for the learner to

deal effectively with synonyms, antonyms, register features, genre, word history, degree of formality, geographical constraints on usage (e.g. American or British), etc. Added to these requirements when using the dictionary for both productive and receptive purposes is the necessity of choosing the most suitable dictionary (L1-L1, L1-L2, L2-L1, or bilingualised dictionaries). In general, L2 learners have been found to frequently use bilingual dictionaries because they save time and make learning easier as they are written in L1 (Baxter, 1980; Scholfield, 1982, 1997; Underhill, 1985; Huckin and Bloch, 1993; Schmitt, 2000; Nation, 2001). Where L2 learners make frequent use of L2-L1 dictionaries, the reason may be that they believe that they fully learn a new L2 word only when they learn its L1 equivalent. Such frequent use can lead to the habit of inappropriately transferring L1 word features to the L2 vocabulary (Baxter, 1980; Thompson, 1987; Stein, 1988; Oxford and Crookall, 1990; Scholfield, 1995). Monolingual dictionaries, on the other hand, may take longer as other new words that are used in the definitions may also require checking and because reading in L2 is usually slower than reading in L1, especially at beginning and intermediate proficiency levels. Scholfield (1997) asserts that the need for greater competence in L2 in order to use monolingual dictionaries makes them less popular. But despite their suitability for the early proficiency levels and certain language tasks (e.g. translation from L2 into L1), bilingual dictionaries are criticised on the following grounds:

1. Bilingual dictionaries may help develop an assumption that there is a L1 equivalent for every L2 word and consequently label L2 words with all the semantic features of their (mostly partial) L1 equivalents, especially abstract words or those that do not represent an entity or a global concept (Baxter, 1980;

Thompson, 1987; Scholfield, 1995; Nation, 2001). The learner may also apply the L1 collocations system when using L2 (Schmitt, 2000).

2. Bilingual dictionaries usually provide less information than monolingual dictionaries (Huckin and Bloch, 1993; Scholfield, 1997; Nation, 2001). The quality of information of a dictionary affects the quality of learning.
3. The search for a L1 equivalent for L2 words can be seen as a way of not using the L2 (Nation, 2001)
4. The learner will find it difficult to productively use some L2 words that have no equivalent in the learner's L1 (Schmitt, 2000).
5. McCarthy (1990) states that when looking up bilingual dictionaries L2 learners tend to focus mainly on the meaning, and overlook other information necessary for language production such as spelling, pronunciation, collocational appropriacy and word formality. Likewise, Scholfield (1997) states that the only piece of information usually targeted by L2 learners when looking up a dictionary is the meaning, specifically the meaning relevant to the context where the new word has appeared. This will result in hindering their abilities to encode vocabulary meanings for language production. Lawson and Hogben (1996) also report that the great majority of the procedures used by their 15 university students trying to learn a number of new Italian words are focused on the meaning of the new words and that little attention is paid to the physical or grammatical features of words. Atkins and Varantola (1997; cited in Nation, 2001) conducted a study on dictionary use by learners of English while performing a translation task. They found that learners checked the dictionary looking more frequently for L1 equivalents. They also found that their subjects were more successful in using bilingual dictionaries and in finding L2-L1 translations (i.e. receptive use).

6. Scholfield (1997) suggests that since monolingual dictionaries require more effort and consequently deeper processing, they can lead to better retention than bilingual dictionaries.
7. Baxter (1980; cited in Gu, 2003) argues that L2 learners' extensive use of bilingual dictionaries makes them unable to access a word in speech or provide circumlocution of a word.

On the other hand, monolingual English dictionaries are always seen by researchers and teachers to be more effective than bilingual dictionaries because they offer more information, especially with regard to meaning and example sentences and phrases, and they train learners to use and think in L2 (Baxter, 1980; Underhill, 1985). However, monolingual dictionaries are not without their limitations. Thompson (1987; cited in Gu, 2003) criticises monolingual dictionaries as being of little use to L2 learners below the advanced level because of their circular definitions. However, recent monolingual dictionaries are undergoing continuous developments, especially with regard to entry definitions, example sentences and frequency information (Scholfield, 1997). These developments aim to make using monolingual dictionaries easier and more popular than before. As already noted, some monolingual dictionaries (e.g. *Longman Dictionary of Contemporary English*, 1995) include a controlled defining vocabulary of about 2,000 words (found in electronic lexical corpora of native speakers to be the 2,000 most frequent in English) to explain all entries, so no other words outside the defining vocabulary are used to explain any word in the dictionary. This may develop the learner's paraphrasing skills (Nation, 2001). Learners can also benefit from the improvement made in some monolingual dictionaries (e.g. *Collins COBUILD English Dictionary*, 1995; *Longman Dictionary*



of *Contemporary English*, 1995) which depend on actual data for providing example sentences (Scholfield, 1997).

Since acquiring L2 vocabulary is a cumulative process requiring a number of encounters, each of which augments already known information, dictionary use may be said to be one source of this cumulative learning. Therefore, the strategy of reading the dictionary is equally useful to look up both known and unknown words (Nation, 2001). Thus a learner may open a dictionary for the purpose of reading it to learn new words and add more information to already known ones without engaging in any other language activity. Hatch and Brown (1995) suggest that dictionaries can be referred to in order to learn words and new uses for old vocabulary and that good language learners use dictionaries to learn not just the words they originally checked the dictionary for, but also to read other related words (inflections and derivatives) or preceding and subsequent entries. Scholfield (1997) remarks that some learners do attempt to learn directly from dictionaries by sitting down with a dictionary and trying to learn new words.

Another strategy using dictionary-like references is checking vocabulary sections within some language learning units or vocabulary glossaries at the end of some books (Schmitt, 1997).

In addition to the manual dictionaries, recent development in computer programming has allowed ESL learners to use instant computerised dictionaries and thesauruses on machine dictionaries and wordprocessing packages in addition to CD-ROM versions of some dictionaries (Scholfield, 1997). Instant computer dictionaries can be used to look up words appearing on a word document or on a website; by clicking on the word intended, the information will appear on a small screen. *Microsoft Word*, for example, provides a thesaurus that can be used while writing or

reading a document. It is argued however that though the ease and speed of instant computer dictionaries might encourage more dictionary use and reading, their effectiveness in terms of word recall might not be as good as using a paper dictionary (Gu, 2003).

2.2.3.2.2 Guessing

Another useful discovery strategy is trying to guess the meaning of new words by following a step-by-step process of eliminating possible meanings by carefully checking them against the linguistic and non-linguistic cues (Chern, 1993). Guessing the meaning of new words mimics the means through which native speakers acquire the vast majority of their L1 vocabulary. In addition, guessing is sometimes the only available technique for getting the message, as in situations where quick responses are required or when referring to a dictionary or asking someone is impossible or inappropriate, as in exam settings and some real life situations. It is also a recommended way of dealing with the increasing number of new words when large amounts of reading or listening are necessary. Guessing from context is one of the few VLSs that have received considerable attention during the last two decades as it is well endorsed in the communicative approach (Schmitt, 1997). It will be discussed in this section as a discovery strategy. The role of guessing L2 vocabulary from context through reading has been discussed in section 2.2.3.1.5 above (p.77).

Chern (1993) argues that frequent guessing of meanings of new words using contextual cues will encourage L2 learners to reduce their reliance on dictionaries, shift their attention from the surface lexical forms to contextual information when their language proficiency increases and develop their tolerance of ambiguity and willingness to make mistakes. Hosenfeld (1977; cited in Scholfield, 1997) observed that looking up new words while reading rather than cautiously guessing or skipping

unimportant words may slow down reading as it becomes a process of word-by-word decoding where the overall meaning is lost. Hosenfield recommends referring to dictionaries only after more effective strategies prove useless.

Guessing unknown words can be either inductive or deductive. Unlike young learners who will usually make a guess through a deductive approach, advanced learners, who are more analytical in their guessing, will usually make their guesses through an inductive approach (Nation, 2001). Clarke and Nation (1980) proposed a five-step inductive procedure when guessing unknown words as follows:

1. Decide on the part of speech.
2. Look at the immediate context of the word, simplifying it grammatically.
3. Look at the wider context of the word (the relationship of the adjoining sentences and clauses).
4. Guess.
5. Check the guess:
 - a. Is the guess the same part of speech?
 - b. Substitute the guess for the unknown word.
 - c. Does it fit comfortably into the context?
 - d. Break the unknown word into parts.
 - e. Does the meaning of the parts support the guess?
 - f. Look up the word in the dictionary.

This procedure, Nation (2001) maintains, does not include 'background context knowledge' and is based on linguistic clues, which are more accessible to the mind. In addition, Nation remarks that this proposed procedure moves from analysing word structure to analysing word meaning (from narrow focus to wider view). This move, Nation asserts, may not be effective if problems in understanding the grammatical

structure (the first step) occur. Analysing the immediate context, the second step, may prove problematic if the main parts of a sentence (e.g. verb, subject, object) are separated by a relative clause, for example.

The strategy of guessing as a discovery strategy involves a number of requirements, some of which are concerned with the learner and some of which are concerned with the text itself (Schmitt, 1997). In respect of the learner, the strategy of guessing unknown words depends on general proficiency level. Therefore, training L2 learners in this strategy may prove useless if their proficiency level is not high (Arden-Close, 1993; in Nation, 2001). An important part of the proficiency level is the learners' L2 vocabulary size. Hence, the strategy of building up a sufficient vocabulary store can be seen as a preliminary step in this regard. The difference in the size of vocabulary store is critical in effectively using the strategy of guessing as a learning and word-solving strategy. A low vocabulary store requires guessing more words, calls for more meaning aspects to learn and consequently less overall understanding of the text to aid correct guessing. Therefore, Laufer and Sim (1985, cited in Nation, 2001) recommend delaying the focus on guessing from context until learners acquire a vocabulary store sufficient to support acceptable guessing. Low proficiency learners are also more easily misled by similar lexical forms, so they may incorrectly guess an unknown word that has a formal resemblance to a familiar word. Huckin and Bloch (1993) found in a study that most of the unsuccessful guessing cases occurred because of word misidentification. Laufer (1985 and 1991; cited in Schmitt, 1997) carried out a study with 500 EFL learners to investigate to what extent similar lexical forms "*synforms*" may induce errors. She identified ten categories of synformic similarities each representing a different type of similarity between the target word and the error produced (see appendix nine). Low-proficiency learners

were also found to force the flow of ideas throughout a text to suit their incorrect guess at the beginning of the text, resulting in considerable misunderstanding of the text as a whole and consequently making other new words more difficult to guess.

In respect of the text, effective use of guessing requires that the learner should also be familiar with the contents of the topic in hand. A text which discusses a new idea or contains a number of new ideas may hinder guessing even if the vast majority of words are well known. The text should also contain enough cues to facilitate the process of eliminating incorrect possible meanings of a new word. Successful processing of the contextual cues depends on a number of variables (Sternberg, 1987:92), as follows:

1. number of occurrences of the unknown word: a higher number will increase the number of available cues;
2. variability of contexts in which multiple occurrences of the unknown word appear: greater variability is more likely to provide different types of information about the unknown word;
3. importance of the unknown word to understanding the context in which it is embedded: if a new word is judged to be important for understanding the text the reader will be more motivated to work out the word's meaning;
4. helpfulness of surrounding context in understanding the meaning of the unknown word; a diurnal event, a spatial cue, a word in a list of known words (e.g. a list of jobs) will aid word guessing;
5. density of unknown words: a high number of unknown words surrounding a given unknown word will decrease the possibility of accurate guessing;
6. usefulness of previously known information in cue utilisation: the amount of knowledge about the topic in hand plays a major role in guessing unknown words.

In addition to these variables, Nation (2001) has suggested a number of features that can help in effectively guessing unknown words. They include:

1. typographical aids (italics, punctuation marks, bolding),
2. word elements (stems and affixes of words),
3. pictures and diagrams,
4. explicitness of clues (e.g. cause and effect, words in series, comparison and contrast, clear synonym or antonym)⁴,
5. closer encounters,
6. availability of relevant clues,
7. proximity of relevant clues (distance between clues and an unknown word),
8. concrete referents are easier to guess than abstract ones,
9. amount of polysemy,
10. proximity of recurrence (distance between repetitions),
11. number of relevant clues (more clues facilitate guessing).

However, Nation and Coady (1988; cited in Lawson and Hogben, 1996) argue that richness in cues of a given context may hinder learning meanings of certain words for long-term use. If the context is rich in clues the reader will pay little attention to new words or their features, because the context is rich enough to generate an approximate meaning. A less rich context, Lawson and Hogben argue, will make the reader try hard to analyse new words in order to comprehend the given text.

It is, however, reported that ESL/EFL learners tend to prefer to use the dictionary rather than try to guess. Alexandri (1995; cited in Scholfield, 1997:285) reports that 20 advanced Greek learners of English preferred to look up new words

⁴ This feature is in line with variable number four in Sternberg's prior list, but it adds more techniques.

rather than guess or skip them for the following reasons (in descending order of frequency):

1. to check a word that seems familiar,
2. because the word is important for comprehension,
3. because the word is difficult to guess,
4. because the word is in the beginning part of the text,
5. because a new word is used again,
6. because the sound of it is attractive ,
7. because it is in the title,
8. because the word is a verb,
9. because it is in the exercises.

2.2.3.2.3 Analysing word parts

The strategy of analysing word units helps learners cope with many new affixed words where the meanings of the root and affixes attached to it are known to the learner (Schmitt, 1997; Nation, 2001). This strategy, in part, reflects the more metacognitive strategy of studying the English morphological affixation system. For example, a learner who knows the meaning of '*knowledge*' and the function of the suffix '-able' is more likely to recognise the word '*knowledgeable*' when meeting it for the first time. This strategy is sometimes misleading, however. Therefore, Clarke and Nation (1980; cited in Schmitt, 1997) suggest that guesses of this kind are checked against the context.

This strategy also applies to compound words whose parts are also well known to the learner. A caveat must be made, especially with compound words, because the

less proficient learners, in particular, may misidentify some new words as compound words (e.g. *outline* as *out of the line*).

2.2.3.2.4 Social strategies

Social discovery strategies entail interacting with others in order to learn about the meaning of new words (Schmitt, 1997). This can be done by, for example, asking a teacher, a classmate, a friend or a native speaker about a L1 translation, L1 or L2 explanation, a L2 synonym or antonym, a sentence including the new word, etc. Using this strategy depends on the availability of outside sources of help and the possibility of utilising this source. For example, learning another language among its native speakers will, of course, allow much more opportunity for interacting with native speakers than learning it in one's home country where native speakers of the L2 are not available or scarce. Similarly, teachers might be unenthusiastic about cooperating with their students or unable to provide learners with proper training or instruction due to lack of knowledge or nature of work requirements.

2.2.3.3. Consolidation Strategies

After the important task of properly discovering the meaning of a new word through one or more of the discovery strategies discussed above, a more important and demanding task is required of L2 learners, namely consolidating the information gained in the first step. Discovering the meaning of new words whether by consulting a dictionary, guessing or asking someone else does not guarantee that new words are kept in long-term memory. Scholfield (1997) states that a learner who refers to a dictionary (or any other source) to check a new word may retain the information about the checked word only for the ongoing language activity and then forget it. Guessing is also a word-solving strategy which is seen by some researchers not as a learning

strategy (at least immediately) but rather as a communication strategy which helps learners cope with imperfect L2 knowledge while reading or listening. Therefore, the knowledge gained by using discovery strategies should be controlled by using the more metacognitive strategies (discussed above) and kept in long-term memory by using the consolidation strategies.

The consolidation strategies of the current study are classified into memory and cognitive strategies. The social strategies which are suggested by Schmitt as consolidation strategies are considered in the current study as part of the more general metacognitive strategies because they can have a greater function than merely consolidating a word once it has been encountered. Schmitt's examples of the consolidating social strategies involve studying and practising meaning in a group, asking a teacher to check flash cards or a word list for accuracy and interacting with native speakers. In reality, working in a group, seeking help from a teacher and interacting with native speakers can be used by L2 learners for a variety of purposes. In addition to consolidating the meanings of already known words, these social strategies can lead to encounters with new words as well as new meanings and new information about already known words (e.g. register, collocations, pronunciation, and other derived and inflected forms). In fact, it is not clear how asking a teacher to check flash cards or a word list for accuracy can help in consolidating recently encountered words, as it seems to be merely a strategy for double-checking information, just like referring to a dictionary. Therefore, the taxonomy of the current study will confine itself to two types of strategies (memory and cognitive) which can be used for the sole purpose of consolidating new words once they have been encountered.

2.2.3.3.1 Memory strategies

Memory strategies '*involve relating the word to be retained with some previously learned knowledge, using some form of imagery, or grouping*' (Schmitt, 1997: 211). Oxford maintains that all the simple principles reflected by memory strategies involve *meaning* and aim to help learners cope with the difficulty of remembering the most sizable and unmanageable component of L2, namely vocabulary. Her memory strategies include creating mental linkages by grouping, associating/elaborating and placing new words into a context (e.g. a sentence) and applying images (e.g. semantic maps, the keyword method).

Studies on English word associations show that native speakers start during their childhood with so-called 'clang associations', where the relationship between the associated words involves some kind of sound similarity. Subsequently, their word associations begin to develop principally into syntagmatic lines (e.g. ship→abandon) where the associations could be described as being sequential. As their language becomes more mature, their word associations become predominantly paradigmatic (more semantic in nature; e.g. important → crucial → significant) (Schmitt, 2000). Schmitt (*ibid.*) recommends the application of this phenomenon to L2 learners. He says (p. 40): '*[t]he large degree of agreement in native responses suggests that the lexicons of different native speakers are organised along similar lines. If natives have a "normal" or "preferred" organizational pattern, then it seems reasonable that nonnatives would benefit if their lexicons were organized similarly.*' Schmitt (2000) also finds that L2 learners do undergo the same progress in their acquisition of L2 lexis. He noticed that beginning learners tend to make clang associations, but that when they move into more advanced levels their clang associations are gradually replaced by syntagmatic associations. Schmitt also

observes that L2 learners need a significant amount of time to develop their syntagmatic associations into paradigmatic ones. Thus he says: '[i]t seems that nativelike association behavior, and by implication nativelike lexical organisation, is something that is not easy to acquire' (*ibid*: 42). The fact that L2 learners undergo the same progression of word associations (syntagmatic and paradigmatic associations) as L1 speakers means that L2 vocabulary acquisition necessarily takes a long time. L2 learners need to realise this fact because they may become disappointed with the length of time it takes them to move on to the stage of paradigmatic associations.

Organised material is easier to learn and recall (Schmitt and Schmitt, 1995). Since L1 native speakers have the lexical items of their language mentally organised in associative networks, L2 learners can also benefit from a number of memory strategies that can effectively activate their mental semantic processing of many L2 words. There are a number of memory strategies. These strategies can be used by L2 learners when they record L2 vocabulary in a notebook. The efficiency of each strategy depends largely on the degree of deep processing which it involves (Sökmen, 1997). The decontextualised memory strategies that involve deep semantic processing of target words are found to be more effective than memory strategies that involve shallow processing (Atkinson and Raugh, 1975; Pressley and Levin, 1978; Pressley *et al.*, 1980; Cohen and Aphek, 1981, O'Malley *et al.*, 1985; Ellis, 1995).

A good memory strategy is making use of available pictures, especially the illustrative pictures available in some dictionaries (Scholfield, 1997). Pairing new words with pictures has been found to be more effective than pairing them with L1 equivalents or L2 synonyms or antonyms (Schmitt, 1997). Using imagery has also been found to be more effective than mere repetition (Steingart and Glock, 1979; Salts and Donnenwerth-Nolah, 1981; both cited in Schmitt, 1997). The "dual coding"

theory of human knowledge (Clark and Paivio, 1991; cited in Sökmen, 1997) asserts the usefulness of combining both the verbal and imagined pictorial representations of vocabulary items in our minds. Connecting a new word to an image will enhance its retention compared to merely memorizing its meanings. Imagined representations can be made through pictures and other semantic charting techniques.

Another mnemonic technique is making a mental presentation of the word pronunciation. For example, an Arab learner of English may use the Arabic word اختبص (ixtabaS) [mix] to learn the English word *octopus* by imagining an octopus mixing something. This is the keyword method which was first described by Atkinson (1975). It is a strategy of applying images and sounds in Oxford's (1990) memory strategies. This method involves attaching a word from L1 to a word in L2 which is close in pronunciation to the L2 word. Then an image is created to combine the meanings of the two words. Consequently, when the learner hears or reads the L2 word, the L1 word will jump into his/her mind along with the created image that links the meanings of the two words. This method has been found very effective for word recall by several researchers (Atkinson and Raugh, 1975; Pressley, Levin, and Miller, 1982; Pressley *et al.*, 1982a; Pressley, Levin, and Delaney, 1982). Yet, this method may have some deficiencies. For example, it may not be easy to find L1 words which are close in pronunciation to many new L2 words and create a strong imaginable link between the two. Even if the keyword is possible with many new words, it is quite hard to retain keyword images for a large number of L2 words (Sökmen, 1997). In addition, Schmitt (1997) assumes that effective use of the keyword method depends on individual instruction because Pressley *et al.* (1982b) found that group instruction was not effective. The merely acoustical similarity and the interlinking associative image produced by the keyword method do not activate semantic processing

(Pressley, *et al.*, 1982). Though this technique could be used by learners of all ages, studies have shown that it is more suitable for young learners (Sökmen, 1997). Carter (1998) also maintains that the keyword method is difficult to apply to abstract words, that it is time-consuming and that it can cause spelling-pronunciation interference. Nonetheless, the keyword method should be seen as one of many vocabulary learning techniques (*ibid.*)

Concreteness also facilitates retention. Concreteness in vocabulary learning takes different forms. A learner may combine a new word with a real experience, with a specific occasion, or even with an experience with the word itself (Sökmen, 1997).

Other strategies promoting a deeper level of semantic processing involve some types of sense relationship such as coordination (similar items: glass, cup, saucer, plate, dish), synonymy (similar meanings: irritated, annoyed), antonymy (opposite meanings), hyponymy and meronymy⁵. Making use of semantic fields in which words are conceptually mapped can facilitate word recall in long-term memory because they require a deep level of encoding (Carter, 1998). Such exercises include making semantic feature grids (semantic feature analysis)⁶, making semantic maps and making semantic scales, (Channel, 1981; in Sökmen, 1997: 249). These exercises correspond to Oxford's (1990) strategies of grouping and applying images.

Semantic feature analysis is based on listing a number of words that are close in meaning in the rows in the first column of a table, whereas the remaining columns of the table display all the meanings which could be associated with any word in the list. Each listed word is marked in the table with a minus (if the word does not share the displayed meaning) or a plus (if the word does share the displayed meaning) under

⁵ Hyponymy is used here to describe specific lexical items included within a single item, e.g. relation of *kitchen*, *lounge* and *bedroom* to *house*) and meronymy refers to a part-whole relation, e.g. parts of the body) (Gairns and Redman, 1986).

⁶ Also called '*semantic field displays*' by Hatch and Brown (1995:37) and more frequently "semantic feature grids" by, for example, Carter (1998) and McCarthy (1990).

each one of all the meanings displayed at the top of each row, as illustrated in the following table:

	affect with wonder	because unexpected	because difficult to believe	so as to cause confusion	so as to leave one helpless to act or think
Surprise	+	+	-	-	-
Astonish	+	-	+	-	-
Amaze	+	-	-	+	-
Astound	+	-	-	-	+
Flabbergast	+	-	-	-	+

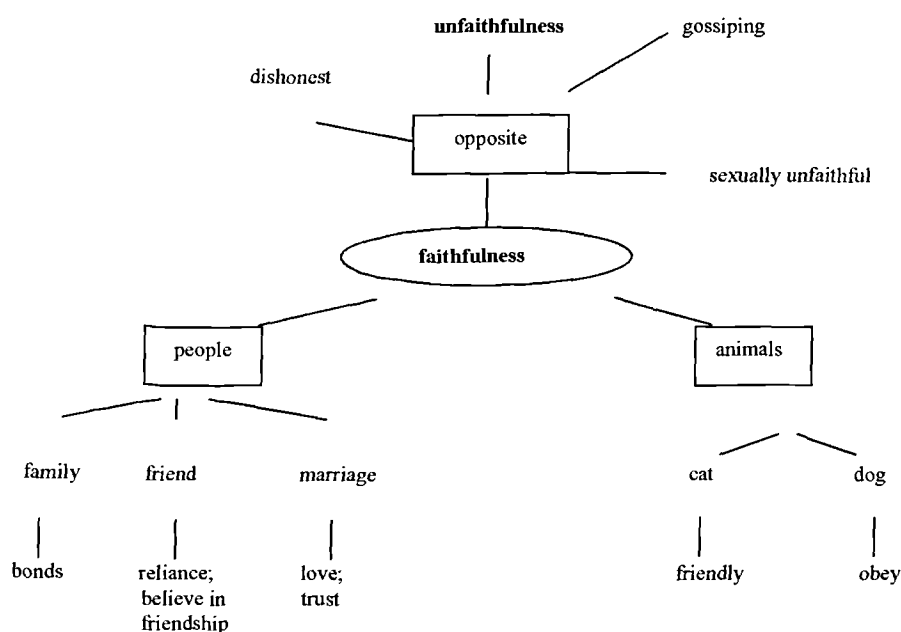
Channel, 1981 (in Sökmen, 1997: 250)

Harvey (1983) found that using semantic grids to organise and categorise words into related areas was useful for trainee translators for vocabulary learning. Harvey (*ibid.*) suggests that using semantic grids offers a new method for taking notes other than word lists; makes learners engage more actively in thinking about possible ways of classifying a set of related words and consequently strengthen word recall; allows the learner to practise autonomous learning; suits all proficiency levels; and lends itself easily to pair and group work. In addition, semantic grids are easy to design and can be used for personal reference. Semantic grids are also said to be more effective for L2 learners who have little interaction with L2 native speakers and less opportunity for live practice and learning of the componential differences among a set of interrelated vocabulary items (Channell, 1981).

The effectiveness of a semantic grid may be conditional on the learner having designed it. Learning directly from already designed grids is not encouraged by some researchers. Carter (1998) criticises direct learning of L2 words using semantic grids because they may suggest a static model of word meanings. He also criticises semantic grids for being in contradiction with the natural order of learning in which core meanings are learnt first while extended and related meanings are learnt gradually afterwards. Semantic grids, Carter warns, may also cause the problem of cross-associations in which the learner confuses similar new words which are learnt

simultaneously. Some researchers (e.g. Tinkham, 1993; Waring, 1997) also warn against simultaneously learning closely related items.

Semantic elaboration may also take the form of semantic mapping. In this technique, a learner draws a hierarchical tree diagram to display a whole-part relationship of a number of branching words, as in the following diagram⁷:



Semantic elaboration can also be employed through “ordering”, also called “semantic scales”. A semantic scale includes a number of semantically gradable words which are different in the degree of an idea (e.g. temperature, ranks, relation, etc.). Gradable words, in particular, can be demonstrated on scales (Grains and Redman, 1986). This technique requires deep semantic processing as it calls on a precise degree of ordering. As is the case with semantic grids, direct learning from semantic scales has come under criticism. Nation (1990; in Sökmen, 1997) warns against introducing L2 vocabulary items using “ordering”. Nation maintains that the “ordering” technique might produce more confusion than elaboration. Therefore, he

⁷ from Sökmen, 1992 (in Sökmen, 1997:250)

recommends this technique as a vocabulary reference only for intermediate and advanced stages.

As far as the strategies discussed in this section are concerned, they seem to be more effective if used as gradual organisation strategies initiated by the learner for future revision. L2 learners, especially at the early stages, are not recommended to study semantically related words simultaneously. Tinkham (1993), in the light of research motivated by interference theory and the distinctiveness (non-similarity) hypothesis, conducted two experiments on learning rates of subjects learning new semantically related and semantically unrelated L2 words. His findings show that learning semantically related words is more difficult than learning semantically unrelated words and that clustering semantically related words actually impeded rather than facilitated L2 vocabulary learning. Read (2000) also points out that learning semantically related words in a word list is more difficult than learning semantically unrelated words. But trying to organise a list of closely similar words is said to promote recall as it involves deep processing though distinguishing differences in meaning during the process of organising (Nielsen, URL address).

Word recall for a word that cannot be related to already known words may be better if the word is learnt as part of a multi-word unit (collocational and lexical phrases) or a sentence (Schmitt, 1997). It is also very useful to study the spelling and pronunciation of new words and say new words aloud when studying (*ibid.*).

Slow receptive and productive language use of L2 learners can be partly attributed to the fact that their performance is characterised by continuous searching for suitable words that are not properly linked in their mental lexicon (Nation, 2001). Native speakers of any language are better than learners of their language in reading, listening, writing and speaking mainly because of the collocational knowledge they

have; collocations being words that frequently occur together in regular word sequence. They form a strong characteristic of the English language, which can be exploited by its learners. Recent studies of English collocation are based on large available lexical computer corpora, which have helped researchers to identify a huge number of collocational patterns. They allow learners who study them to learn the contexts in which an individual word may occur, and how its meanings may differ totally or partially from one context to another (Miller, 1999; cited in Nation, 2001). The study of multi-word units (MWUs) has a linguistic value for L2 learners in the necessary analysis of the MWU's components (Schmitt, 2000); but for purposes of word recall the value of MWUs lies in the fact that they require deep cognitive processing. MWUs can also be used by L2 learners as linking means for ideas and continuity of self-expression (*ibid.*). Carter (1998) asserts that fixed expressions are important for maintaining discourse. He says (p.223):

In the development of lexical discourse competence one more area is important. This concerns the role in discourse of fixed expressions ... Fixed expressions are both creative of discourse relations and are crucial to the maintenance of that discourse. They serve, for certain communicative purposes, to provide a relatively stereotyped, stable and prosaic response to events perceived as recurring and formulaic.

Noting a new word in a sentence or a phrase consolidates its retention in memory and facilitates its productive use later on. The sentence would be more natural if the original context of the new word is noted. Placing new words into context is Oxford's (1990) third type of memory strategy. Another good source for naturalistic use of new words is the examples available in those monolingual

dictionaries that provide corpus-based, authentic example sentences (Scholfield, 1997).

According to Schmitt (1997), word recall can also be aided by focusing on the orthographical or phonological form of new words. This may involve directly studying the spelling or pronunciation of new words and saying new words aloud. This is an essential requirement for using L2 words receptively (in reading and listening) or productively (in speaking and writing). Another consolidation strategy suggested by Schmitt is studying a new word's affixes and root. For example, the word 'refinery' could be learnt and consolidated by recognising it as being the noun form of the verb 'refine'. Word consolidation can also be achieved by linking a word to a personal experience or to someone else's experience.

2.2.3.3.2 Cognitive strategies

The second category of consolidation strategies is cognitive strategies. Schmitt (1997: 215) explains that the difference between memory and cognitive strategies saying that '*cognitive strategies ... are similar to memory strategies, but are not focused so specifically on manipulative mental processing*'. Cognitive strategies include verbal repetition, written repetition, repeated listening and using revision materials such as word lists, flashcards, class-notes, vocabulary sections in textbooks and the learner's vocabulary notebook. Revision may involve already published material or the material designed by the learner along the lines of the memory strategies discussed in the previous section. Repetition strategies facilitate word recall as they involve focusing on the written or spoken forms of a new word and consequently help learners associate meaning and form. Repeating a new word aloud facilitates word recall (Read, 2000). Repeated listening allows more focus on the individual sounds, number of syllables and stress (Channell, 1981; cited in Nakamura,

2000). Similarly, repeated writing allows more focus on the spelling of new words and as a result aids recognising them in reading. Previous research reports that repetition strategies are among the most frequently used strategies by L2 learners (e.g. O'Malley *et al.*, 1985; Chamot, 1987; Ahmed, 1988, Nakamura, 2000; Lawson and Hogben, 1996; Gu and Johnson, 1996). Schmitt's (1997) study on Japanese EFL learners shows that written and spoken repetition are the most used consolidation strategies with 77% of Japanese learners using them. The related strategies of studying the spelling of new words, studying the sound of new words and saying new words aloud, are also among the frequently used strategies. Schmitt (*ibid.*) acknowledges that although the Depth of Processing Hypothesis (Craik and Lockhart, 1972; Craik and Tulving, 1975) doubts the effectiveness of repetition strategies, it must be admitted that some learners have reached high levels of proficiency by using them. Some learners may depend chiefly on repetition strategies and pay little, if any, attention to other strategies. O'Malley and Chamot (1990; cited in Schmitt, 1997) report that students who are used to repetition strategies often resist giving them up to try other kinds.

CHAPTER THREE: RESEARCH METHODS

This chapter describes the research methods used to investigate the use and evaluation of VLSs discussed in the taxonomy of the current study in Chapter Two (cf. 2.2.3, pp. 73-120 above) by Saudi EFL learners majoring in English in Qassim Imam University. It will describe the aims, objectives and hypotheses of the study; the subjects of the study; instruments used to conduct it; the process of data collection; and the method of data analysis.

3.1 Aims

The present study attempts to investigate the use and evaluation of VLSs by Saudi EFL learners majoring in English who are studying at the Department of English and Translation in Qassim Imam University, Saudi Arabia. The study also aims to present a taxonomy of VLSs. From findings reached in this study, pedagogical implications will be drawn for promoting Saudi EFL learners' awareness and augmenting their use of VLSs.

3.2 Objectives

The main objectives of the study are:

1. to provide quantitative analysis of VLSs used by Saudi EFL learners majoring in English in Saudi Arabia,
2. to provide qualitative and quantitative analyses of the word-solving strategies used by Saudi EFL learners majoring in English in Saudi Arabia in a reading comprehension task,
3. to investigate the evaluation of VLSs by Saudi EFL learners majoring in English.

3.3 Hypotheses

The overall hypotheses relating for the foregoing objectives are:

1. Saudi EFL learners majoring in English in Saudi Arabia use certain VLSs more frequently than others.
2. They do not use certain VLSs.
3. They are unaware of certain VLSs.
4. They do not effectively use certain word-solving strategies (WSSs).

3.4 Subjects

The participants of the questionnaire survey are 50 undergraduate students in their final year (7th and 8th levels) at the Department of English and Translation in Qassim Imam University, Saudi Arabia. These two levels are the last of eight levels, each constituting a whole semester. Thus, the bachelor degree course consists of eight semesters over four years. Before enrolling on the course, the participants have also studied English for six years in junior and high schools (three years each). The subjects constitute a homogeneous group. They are males and native speakers of Arabic with no previous experience in learning another language than English. They roughly belong to the same age category (22-24 years old) and come from similar social and economic backgrounds.

47 of the 50 participants who took part in the questionnaire survey participated in the TAP experiment because three subjects did not show up. However, three subjects were also excluded due to the poor sound quality of their recordings. A further two subjects were excluded as well because they were not cooperative in that they did not perform the task as they were told to. They did not articulate an understanding of the assigned texts and did not explain how they might have

approached new vocabulary items. This happened in spite of the fact that all the subjects were first trained in how to perform the task and during the experiment were continuously instructed in the different requirements of the task. The performance of the 47 participants in the TAP experiment is analysed in Chapter Five with a presentation of 9 typical cases of the five categories of performance.

Individual interviews were held with some respondents. After completion of the TAP experiment and the questionnaire, the respondents were invited to participate voluntarily in the individual interviews. The response was very positive as 25 subjects wanted to take part. However, because of time constraints the number was reduced to 10.

The study samples can be considered ideal for the current study for three reasons. First, they are typical of male Saudi EFL learners majoring in English in terms of their degree of exposure to English inside and outside the university. Second, they are considered to have more experience in using VLSs and a better understanding of the background and aims of the study, as well as of the content of the questionnaire items and the TAP experiment than their counterparts have in earlier semesters. Third, they represent the ideal academic level for the purpose of suggesting pedagogical implications to the module planners in their department. This is principally because, compared to students at earlier levels, their experience in using and evaluating VLSs should reflect in a greater degree the course modules in terms of both strategic use and training. Pedagogical recommendations for students from earlier levels might be redundant, as they may already be on the agenda of both the module planners and teachers for the later semesters.

The students at the department take English major and non-major modules. The English major modules are taught by Arab teaching staff members (Saudi and non-Saudi). The English-major modules are as follows:

Level one: <ul style="list-style-type: none"> - English Grammar (1) - Listening and Conversation (2) - English Phonetics - Reading and Vocabulary Building (1) - General Translation 	Level two: <ul style="list-style-type: none"> - English Grammar (2) - Listening and Conversation (2) - Selected Texts Of Modern Prose - English Composition (1) - Scientific Translation (1)
Level three: <ul style="list-style-type: none"> - Computer Operation - Phonetics - English Grammar (3) - Reading and Vocabulary Building (2) - Scientific Translation (2) - English Composition (2) - English Literary Texts 	Level four: <ul style="list-style-type: none"> - English Grammar (4) - Listening and Comprehension (3) - Literary Translation - Introduction to Linguistics - Selected Literary Texts
Level five: <ul style="list-style-type: none"> - Methods of Teaching English - Translation of Islamic Texts - Contrastive Linguistics - English Grammar (5) - Essay Writing - Selected Literary Texts 	Level six: <ul style="list-style-type: none"> - Translation of Islamic Texts - Applied Linguistics - History of English Language - Psycholinguistics and Sociolinguistics - Selected Literary Texts - Research Methods
Level seven: <ul style="list-style-type: none"> - Oratory - Problems of Teaching English - On-sight Translation - Introduction to Semantics - Essay Writing - Selected Literary Texts - Research 	Level eight: <ul style="list-style-type: none"> - Practical Education - public Speaking - Simultaneous Translation - Analysis of Texts - Selected Literary Texts

3.5 Instruments

Three research methods were used in this study. These are a questionnaire survey, think-aloud protocols and individual interviews. Each method will be discussed below.

3.5.1 Questionnaire

A questionnaire was used in the current study as the main tool for collecting data on Saudi EFL learners' use and evaluation of VLSs. Despite the fact that in a questionnaire survey the respondents may report what they believe they should do and not what they actually do (McDonough, 1995; Cohen, 1996, 1998), a questionnaire was used for the following reasons:

1. Previous key comprehensive studies on the use of LLSs and VLSs by L2 learners used questionnaire surveys (e.g. Oxford and Nyikos, 1989; Ahmed, 1988; Stoffer, 1995; Schmitt, 1997; Kudo, 1999; Segler, 2001);
2. A questionnaire is useful to cover a large number of both strategies and respondents (Oxford, 1996; Cohen, 1998);
3. It allows generating and testing hypotheses because of the large number of respondents (Cohen, 1998);
4. It is easy to administer in a relatively short time (Oxford, 1996);
5. It will allow the researcher to collect substantial amounts of information in a relatively short time;
6. It can provide important information on individuals and groups that is either not available or difficult to obtain from other types of research (Brown, 1988).
7. The results can be analysed in a relatively short time;

Brown (*ibid.*: 5) adds that surveys and experimental studies '*are (1) systematically structured with definite procedural rules, (2) based on a step-by-step logical pattern, (3) based on tangible, quantifiable information, called data, (4) replicable in that it should be possible to do them again, and (5) reductive in that they can help form patterns in the seeming confusion of facts that surround us.*'

No predefined list of VLSs was used in the questionnaire of the current study, because they mainly aimed to ascertain the subjects' use and evaluation of a wide range of VLSs identified in previous studies and relevant literature. The questionnaire was first tried on two former students and two staff-members at the department. This was to screen for possible ambiguity in the wording of the questionnaire and to invite revisions in terms of organisation, deleting, modifying, or adding further strategies.

The questionnaire was administered in Arabic. It included a cover letter which explained to the respondents both the background and aims of the study. It was divided into three main sections (see appendix ten (a) for the Arabic version and appendix ten (b) for the English version) according to the classification of VLSs in the taxonomy of the current study (cf. 2.2.3). It included both close-ended and open-ended questions. The close-ended questions enquired about the respondents' use and evaluation of VLSs. Each close-ended question consisted of two parts. The first part required a frequency of use indication for the strategy in question from the predefined range: 'always', 'often', 'sometimes', 'rarely' and 'never'. The second part required an evaluation of each strategy within a rating range of 'very useful', 'useful', 'quite useful', 'not useful', and 'I don't know'. The respondents were also invited to write down their comments on each strategy use and evaluation, if they wished. The open-ended questions were designed to elicit additional information expanding on some closed answers.

3.2.5 Think-aloud Protocols (TAPs)

TAPs were used in the current study for two main purposes: 1) to investigate the use of discovery strategies by Saudi EFL learners in a reading comprehension task, and 2) to assess each subject's overall vocabulary proficiency level. In a think-aloud experiment, researchers instruct their subjects to verbalise immediately the thoughts entering their minds while performing the task (Ericsson and Simon, 1993). The protocol analysis (Ericsson and Simon, 1984) is used to investigate the subject's use of WSSs while reading. Protocol analysis is expected to yield a rich body of data needed in an exploratory study (Huckin and Bloch, 1993). Previous research has shown that protocol analysis can be used to investigate L2 learners' performance (e.g. Hosenfeld, 1977, 1984; Van Parreren and Schouten-van Parreren, 1981; Raimes,

1985; Huckin, 1986; all cited in Huckin and Bloch, 1993; Ahmed, 1988; Arden-Close, 1993; Chern, 1993; Huckin and Bloch, 1993; Gu, 1994; Lawson and Hogben, 1996; Al-Seweed, 2000; Al-Smael, 2000).

The effectiveness of TAPs is based on the assumption that production data (e.g. outcome of reading comprehension or L2-L1 translation) can be complemented by verbal commentaries which give deeper insight into certain aspects of the underlying L2 competence than can be provided by the outcome of reading or translation tasks alone (Kormos, 1998; Poulishse, Bongaerts and Kellerman, 1987). Kormos (1998:354) says that *'the complementary use of verbal reports allows researchers to go beyond the common practice of analyzing L2 speakers' competence solely on the basis of performance data, as this research method can help reveal the cognitive and psycholinguistic processes underlying performance'*.

The use of TAPs in the current study to investigate the WSSs used by Saudi EFL learners is based on the premise that identifying and solving problematic vocabulary items constitute controlled (i.e. conscious) processes which are accessible for verbalisation because they are in the subjects' short-term memory. That WSSs are conscious processes is deemed to be more apparent in the case of EFL learners whose proficiency level could be judged to be below that of very advanced EFL/ESL speakers or native speakers of English. The latter may identify and solve lexical problems on an unconscious level, making their processes inaccessible for verbalisation, whereas L2 learners usually have more problems with L2 aspects (e.g. vocabulary) which would require conscious problem-solving strategies.

The use of TAPs, like any other research method, is not without its limitations. The researcher tried to keep such limitations to a minimum. They can be summarised into the following points (Cohen, 1994:678):

1. Cognitive processing is inaccessible. That is, some mental processes that the informants actually go through while performing a task are not, at least not fully, reported. However, Ericsson and Simon (1984) maintain that though verbal protocols can capture only a fraction of a subject's thought, they can provide rich data tracing the thinking process, from which a rough model of the latter may be built (Huckin and Bloch, 1993).
2. Verbal reports may cause *intrusive effects*. Performing two tasks simultaneously (verbalising thoughts and addressing the task in hand) might affect the informants' performance of the main task. Yet Ericsson and Simon (1980) hold that this will not be the case if the main task is oral. Therefore, the subjects of the current study were not asked to write down their comprehension of the texts. They were simply asked to orally verbalise their WSSs and comprehension while reading.
3. The type of data collected via verbalised thoughts while performing a task may vary according to the nature of the task, type of instructions, and types of materials used. These limitations were carefully considered in the current study. The nature of the task in the current study is not sophisticated but rather simple: the subjects were asked to verbalise their comprehension of a reading text and try to work out unknown words for this purpose. This task has been used in a number of previous studies on L2 learners' use of WSSs (e.g. Hosenfeld, 1977, 1984; Van Parreren and Schouten-van Parreren, 1981; Ericson and Simon, 1984; 1993; Haastrup, 1987; Huckin, 1986; Ahmed, 1988; Haynes, 1993; Arden-Close, 1993; Chern, 1993; Huckin and Bloch, 1993; Gu, 1994; Lawson and Hogben, 1996; Al-Fuhaid, 2000; Al-Seweed, 1996, 2000; Al-Smael, 2000). As for the type of instructions, the subjects, according to the recommendations of Ericsson and Simon (1980), were not asked to verbalise specific information nor were they asked to produce information not normally available during the task performance. Rather they were asked to verbalise whatever came to

their minds while trying to solve problematic words. Due consideration was also given to the type of material used (i.e. reading texts, discussed below).

4. If verbal reports are in the informants' L1, some information may get lost as the informants keep shifting from their L1 (while verbalising) to L2 (while performing the task) and vice versa. Nevertheless, it is believed that asking the subjects to verbalise their comprehension of a reading text is a means for revealing all controlled processes of dealing with unknown words.
5. Analysis of verbal reports is time-consuming. This is because it would usually require transcribing informants' recordings, comparing verbal reports to a given coding scheme, providing quantitative and qualitative analysis, etc. Nevertheless, the rich data obtained from using TAPs justify the effort and times spent in collecting and analysing them.
6. A disadvantage of TAPs is that they might lead the subjects to spend more time on guessing unknown words than they would normally do. If the subjects know that their comprehension will be assessed, they are less likely to risk unsuccessful or even partial guesses, may claim to do things that they don't usually do and not freely practise avoidance strategies, and may produce unnatural thought processes through pretending to do things that they do not usually do, or, instead, they may perform what they believe should be done. This disadvantage, however, may not fully apply to the current experiment. This is because the TAP experiment in the current study aims to investigate the subjects' optimum abilities in terms of demonstrating their vocabulary competence in general and their skills in dealing with unknown words in a written text in particular. In other words, the respondents cannot pretend to know a word which they actually do not know because they have to verbalise their understanding of the texts in hand

Nevertheless, the subjects were encouraged to demonstrate what they would normally do when using WSSs. They were reassured that their participation would be strictly anonymous and that their performance in the experiment would by no means affect their course marks.

The texts were carefully selected in order to achieve the aims of the experiment (see appendix eleven A-E). Therefore, the texts had to meet the following criteria (cf. Al-Seweed, 2000):

1. The texts should be similar to the types of text that the subjects usually read in academic situations;
2. They should not be difficult;
3. They should allow use of discovery strategies that require certain conditions;
4. They should be interesting;
5. They should be authentic;
6. They should not be too long.

With regard to the first condition, the researcher used his experience as an EFL learner and teacher to select suitable texts for the experiment. Further, the texts were given to two staff-members to read them and judge their suitability. They both agreed that the texts are generally of the same type that the subjects may read in reading and translation activities.

The difficulty of the texts was also assessed by asking two former students who had recently graduated from the department to read them and underline the words unknown to them. This assessment of the texts' difficulty is, however, quite a precautionary measure, given that the subjects of the current study were to be allowed to use the dictionary in the experiment. The words that each student underlined and

the proportion of unknown words to the total number of words in each text are shown in the following table.

texts	unknown words	total*	% *
A	5 words = <i>nod, hammer out, superintendent, deter, invasive,</i>	174	2.87 %
B	6 words = <i>cumulative, scheme, Mutiny on the Bounty, abridgments, prompted,</i>	196	3.06 %
C	9 words = <i>chalks out, mundane, Sovereign, Deity, cognition, to tread, steadfastness, vicissitudes, squarely</i>	147	5.44 %
D	4 words = <i>crust, alloys, bodywork, oxidation,</i>	237	1.68 %
E	8 words = <i>genre, awe, devoted to, confronting, empirical, disciplines, zymurgy, numismatics,</i>	251	3.18 %

total = total number of words in text

% = proportion of unknown words to total number of words in text

The texts were given to two former students because it was inappropriate to show the texts to students from levels seven or eight, the target sample, in case they revealed their content to their classmates; and because we did not want to exclude any subject from the target sample of the study later in the experiment. It was also inappropriate to give the texts to students from earlier levels, because of possible differences in proficiency level. In addition, the researcher did not want to expose the texts to any person who might have contact with the subjects chosen as sample. Therefore, the researcher did not allow the two staff-members or the two former students who read the texts to retain copies of the texts.

A variety of other criteria had to be considered when selecting the texts. The availability of contextual clues was important, as was the good provision of punctuation marks. Texts also had to include lexical items that would require word-segmentation, recognising infrequent use of common words, working out idiomatic expressions, recognising a series of similar words, dealing with derived forms, making use of world knowledge and making use of figures (e.g. the table in text B). They also had to include some difficult grammatical structures.

With regard to the authenticity of the texts, the five texts are all authentic. None of them is derived from a textbook written specially for L2 learners. Their

content was also potentially interesting to the subjects. Text A discusses a social problem, text B talks about graded readers, text C is a religious text, text D is about aluminium, and text E is about technical translation. The length of the text was set according to both the nature of the task and time constraints, though it was difficult to keep a balance between these two conditions. Therefore, beyond the assigned parts of the texts, all texts were continued by some lines in order to allow the subjects to increase their comprehension. Using text A, an average number of 14 words per line was calculated. The total numbers of words in all five texts (1005 words) was then divided by 14 to give a working total of lines across all texts (71). The average number of lines per text was then calculated as $71 \div 5 = 14.35$.

3.5.3 Individual Interviews

The individual interviews data was used to probe in greater detail the use and evaluation of VLSs by 10 subjects and to clarify some comments made by the respondents on certain strategies included in the questionnaire survey. The interviews were held on the basis that the interviewees' comments would supplement the interpretation of the questionnaire results. Therefore, they were not coded.

The interviews were conducted in Arabic and were tape-recorded. The interviews were semi-structured in that they were both researcher-controlled and student-initiated. That is, in addition to having a predefined list of questions for all interviewees, the interviewees were allowed to comment on the strategies which they found particularly interesting or important. They were also allowed to ask questions about the experiment or any other relevant issue.

3.6 Data Collection

The three research instruments were administered according to a specific sequence. The TAP experiment was conducted first because it was thought that the subjects' performance might be affected by the content of the questionnaire items or by the concepts discussed in the interviews. In particular, they might use some discovery strategies that they would not usually use (e.g. word-segmentation, skipping, using a monolingual dictionary, checking more information in the dictionary). For two reasons, the individual interviews were held three days after the subjects filled in the questionnaires. First, this gave the researcher sufficient time to read the subjects' responses and comments on the VLSs investigated in the questionnaire. Second, the interviewees would then have a better understanding of the experiment in terms of background, aims and research questions so that they would provide valuable interview data to be used in interpreting the results and findings of the questionnaire. The experiment took place during the first week of the semester in order to avoid the busy schedules during the semester.

3.6.1 TAPs

In order to achieve an accurate representation of the subjects' cognitive processes, the researcher made sure that the following guidelines for using verbal reports (Ericsson and Simon, 1980 and 1993) were adhered to:

1. The subjects should be provided with contextual information in order to have access to the information in their short-term memory.
2. The experimenter should ask for retrievable information, that is, the thought sequence that the subjects are usually aware of while performing a task.

3. In think-aloud experiments, the subjects should not pay attention to the task of verbalising their thoughts at the expense of the main task. For this purpose they will need a warm-up practice.
4. In think-aloud experiments, the informants should be instructed to verbalise all the thought sequences that they go through while performing the task.
5. During think-aloud experiments, the researcher should repeatedly encourage the informants to keep talking while solving problems.

In order to increase the quality of the subjects' verbalisation of their TAPs, the experimenter decided to train them in verbalising their TAPs in a real reading comprehension task. The warm-up experiment aimed to achieve the following goals:

1. to train the subjects in using a Sony lab;
2. to train them in verbalising their TAPs continuously during the experiment;
3. to train them in how to verbalise their TAPs when they encounter a new word;
4. to help smooth away subjects' fear of the experiment by making them realise the simplicity of the task and by creating a friendly atmosphere during the experiment;
5. to draw the subjects' attention to the need for a dictionary. They were not explicitly told to bring their dictionaries to the main experiment on the grounds that each subject should bring, if any, only the type of dictionary that he usually uses;
6. to avoid possible technical problems that may happen in the main experiment.

The warm-up experiment was also useful as training for the researcher in monitoring the subjects' performance through the master control and through walking through the lab. The master control allowed the researcher to listen to

subjects while speaking through their microphones. It also allowed him to speak to a single subject separately or to two or more subjects at the same time, either to encourage continuous verbalising or to give other instructions. The researcher found using the master control more effective than walking through the lab for monitoring the subjects' performance. Thus, the researcher could note down any deficiency in performing the task. More points were added to the list after listening to the warm-up tapes. The points were discussed with the subjects in a separate session and were typed on a piece of paper for the subjects to read before the main experiment.

The negative aspects in some subjects' performance in the warm-up experiment included:

1. not continuously verbalising TAPs,
2. not verbalising comprehension,
3. not using the dictionary, thinking that the experiment is a comprehension test,
4. poor sound quality,
5. verbalising only comprehension and not giving details of dealing with new words,
6. thinking that the experiment is a translation task requiring the provision of an Arabic equivalent for every word,
7. not verbalising TAPs when using the dictionary,
8. spending too long in dealing with some aspects of the reading comprehension task (e.g. working out a new word, trying to explain the title, using the dictionary).

The main experiment was conducted two days later. Two separate sessions, each one and a half hours long, were held for students of level 7 and level 8. The

subjects were reminded of the mistakes they made in verbalising their TAPs in the warm-up experiment.

3.6.2 Questionnaire

The questionnaire was administered in two sessions, again for level 7 and 8 students respectively. Each session lasted for about one-and-a-half hours. The respondents were first briefed about the general background and aims of the study. They were encouraged to provide as much data as possible, and were reassured that their responses would be anonymous and strictly confidential. It was important to advise them that their responses would have no bearing on their academic status in the form of performance reports or marks. This was followed by an explanation of the layout of the questionnaire and how to answer the various items.

Then, a ten-minute break was given before the respondents started to answer the questionnaire items. A cover letter was attached to the questionnaire explaining to the respondents the background, aims and ethical issues of the study. They were encouraged to report what they actually do in respect of strategy use and what they actually believe in respect of rating the usefulness of each strategy, especially in view of the anonymity of their responses. They were repeatedly reminded to answer all of the questionnaire items. It took the respondents 45-55 minutes to complete the questionnaire.

3.6.3 Individual Interviews

During the interview, the interviewee had a copy of the questionnaire to comment on the items one by one. The researcher also raised some interesting comments emerging from the questionnaire responses. The interviewees were also allowed to discuss any

point not covered in the questionnaire and to ask questions about the study or any other issue. Each interview took about 25 minutes.

3.7 Data analysis

3.7.1 Questionnaire Analysis

Frequency and evaluation responses were scored according to a 100-point scale. The frequency scale was 100 points for 'always', 75 points for 'often', 50 points for 'sometimes', 25 points for 'rarely', and 0 points for 'never'. Similarly, the evaluation scale was 100 points for 'very useful', 75 points for 'useful', 50 points for 'quite useful', 25 points for 'not useful for the current level', and 0 points for 'I don't know'. The frequency and evaluation indexes for each strategy were measured by dividing the total points by the number of subjects. The total points were calculated by adding together scores for all the students' responses for the strategy in question.

The analyses of individual questionnaire could not be linked to individual interviewees or individual TAPs because of the anonymity of questionnaire responses.

Rather, the overall results of both the questionnaire and TAP data were compared to each other while the interview data was used to supplement these analyses.

3.7.2 TAPs Analysis

Analysis of verbal reports requires a well-organised coding scheme supported by a theoretical basis (Cohen, 1994). Fulfilment of this prerequisite would supposedly derive from previous similar studies, which would offer a foundation of theoretically based hypotheses and assumptions. Kasper (1998: 358) asserts that *'verbal reports are not immediate revelations of thought processes. They represent (a subset of) the information currently available in short-term memory rather than the processes*

producing the information. Cognitive processes are not directly manifest in protocols, but have to be inferred.' As verbal reports stand only indirectly and partially for cognitive processes, Kasper maintains, researchers will need to base their analysis of informants' protocols on a principled, theory-based coding scheme. The researcher can either follow an existing coding scheme or devise his/her own. Kasper also recommends providing several examples of informants' verbalisations so that the readers can better understand the analysis of the data. The current study observed both suggestions: a coding scheme and example protocols. The analyses of nine samples include many examples of their protocols. Eight criteria for the coding scheme were used to analyse the subjects' performance in working out unknown words in the reading task and to assess their overall L2 vocabulary competence. They were also used to classify each subject's performance of the task as very successful, successful, barely successful, unsuccessful, or very unsuccessful. These criteria are discussed below (cf. Al-Smael, 2000).

3.7.2.1 Proficiency Level

The criterion of a subject's proficiency level is important because it indicates the subject's L2 efficiency and potential for vocabulary learning from reading. In the current study, proficiency level refers to the subject's vocabulary and grammar knowledge. Vocabulary knowledge is assessed against the type of problematic words that the subject encountered (i.e. very frequent, quite frequent, very infrequent). Each subject's proficiency level was also assessed with regard to understanding grammatical structures. The less frequent the grammatical misunderstandings, the more proficient the subject was judged to be.

3.7.2.2 Contextual Understanding

The analysis of a subject's proficiency level also considered how his vocabulary and grammatical knowledge influenced his overall understanding of the texts. Analysing a

subject's contextual understanding involves assessing success or failure to utilize the text in hand as source of information (e.g. sentence and clause structure, punctuation marks, pictures, tables, diagrams, word structure). It also examines the subject's criticality towards comprehension, concentration and haphazard misjudgment. In addition, when guessing, looking up or skipping a new word, the subject's consideration of immediate and wider context and of the general argument is taken into account.

3.7.2.3 Using the Dictionary

Analysing the subject's use of the dictionary involved six criteria: 1) the type of dictionary used, 2) criticality towards the dictionary definitions with respect to the context, 3) reading all the listed meanings, 4) reading example sentences and phrases, 5) considering pronunciation, and 6) awareness of the dictionary's shortcomings.

3.7.2.4 Guessing Unknown Words

The analysis of this strategy requires assessing the subject's patterns of guessing: 1) final guessing (i.e. not followed by checking the dictionary), 2) dependent guessing (i.e. followed by checking the dictionary), or 3) no use of guessing. It also requires examining whether the subject checks his guess against the context or not. This involves considering cases of successful or unsuccessful contextual guessing (using local or global cues) and successful or unsuccessful morphological guessing (using cues within the unknown word itself). Cases of semantic analysis (e.g. cause and effect, words in a series) are also considered.

3.7.2.5 Skipping New Words

The analysis of the subjects' use of the strategy of skipping concerns patterns of skipping and quality of skipping. Three patterns of skipping are examined: 1) not used, 2) occasionally used, or 3) frequently used. With regard to the quality of skipping, the subjects' use of skipping is considered as either justified (skipping unimportant words for

understanding the overall message of the text) or unjustified (skipping key words which are important for understanding the overall message of the text).

3.7.2.6 Global Knowledge

Using global knowledge to comprehend the text involves utilising one's background knowledge of other texts, knowledge of topic, personal experience, and cultural knowledge.

3.7.2.7 Time-management

Time management refers to speed of reading, number of texts, paragraphs and lines covered; time spent on dealing with unknown words; and adjusting the rate of reading. Time management is a good indicator of how successful a subject might be as potential learner of L2 vocabulary from reading.

3.7.2.8 Planning

Planning refers to the actions taken 1) before, 2) during and 3) after the task of dealing with new words. Actions before commencing the task include reading the whole text first at least once. Planning during the performance of the task relates to actions such as immediate problem-solving, deferred problem-solving, reading complete sentences first or a complete paragraph before commencing the required task, deciding how and when to refer to a dictionary, and guess or skip new words. Post-task planning requires revising comprehension of the whole text in general and of new words in particular.

3.7.3 Individual Interviews

Interview data was not coded. The interviews were transcribed and used to supplement the interpretation of the results of the questionnaire data where appropriate.

3.8 Ethical Issues

The subjects were told that their participation in the study was entirely voluntary. They were also informed that collected data would be strictly confidential. Their participation in the questionnaires survey and TAP experiment was anonymous.

3.9 Variables

The current study involves two types of variables: dependent, and controlled variables. In this study the dependent variables are the use and evaluation of VLSs by Saudi EFL learners majoring in English. Controlled variables are nationality (Saudi), setting (Saudi Arabia), L1 (Arabic), gender (male students), university major (English).

It is not the purpose of this study to investigate the interaction of these variables. However reference is made to the variables in the discussion of the findings.

3. 10 Validity

The research methods used in the current study are believed to be valid for achieving the overall aims and specific objectives of the study. This belief is based on the following grounds:

1. The three research methods used in the current study (i.e. TAP experiment, questionnaire survey and individual interviews) are believed to have covered the theoretical and empirical issues discussed in the literature review and previous empirical studies.
2. The use of a questionnaire is believed to have achieved the aims and objectives of the study (cf. 3.5.1 above).
3. The use of the TAPs allowed the experimenter to have access to the subjects' actual use of discovery strategies (cf. 3.5.2 above).

4. The questionnaire items were monitored by my supervisors and by two staff-members at the department.
5. Two former students at the department were interviewed and asked to revise any of the questionnaire items in order to avoid ambiguity in wording and content of the final version.
6. The participants were not restricted to the 5-point scales of the questionnaire items or to the researchers' questions in the interviews. The questionnaire respondents were given sufficient space (and could also use the back of the sheet) to comment on both the use and evaluation of the strategy in question. They were also asked to add any strategy that they might use which was not included in the questionnaire. Moreover, the interviewees were allowed to comment on the study and report any other strategy not included in the questionnaire or discussed in the interviews. Individual participants were also invited to meet the researcher to discuss any issue related to the study.
7. The data obtained from the interviews supported the results of the questionnaire data, which indicates a strong degree of validity.
8. The findings of this study generally agree with findings from previous research.

3.11 Reliability

The reliability of a test is defined as the extent to which the results are consistent or stable if the questionnaire is administered to the same group some time later. There are three common ways for measuring reliability in language studies: (1) test-retest, (2) equivalent forms, and (3) internal consistency (Brown, 1988: 99). Test-retest reliability refers to the calculation of a correlation co-efficient for two administrations of the same test to the same groups of subjects twice. Measuring reliability using equivalent forms requires administering two equivalent tests to the same groups of subjects and calculating the

correlation between the two sets of scores. Internal reliability can be measured through the split-half method, Kuder Richardson formula 20 (K-R20) and Cronbach alpha (*ibid.*). Brown states that internal consistency estimates are the ones most often reported in language studies because they have the advantage of being calculated from a single form of a test administered only once while test-retest and equivalent form reliabilities require either two administrations or two forms. He (2002) also states that Cronbach alpha and K-R20 are the most commonly reported reliability estimates in the language testing literature. However, Brown (*ibid.*) remarks that Cronbach alpha is more flexible than K-R20 because the K-R20 can only be applied if the test items are scored dichotomously (i.e. right or wrong), whereas Cronbach alpha can be applied when test items are scored either dichotomously or when items are weighted (on a five-point scale for example, as in the questionnaire survey of the current study) The current study, therefore, used Cronbach alpha to measure internal consistency reliability (alpha coefficient) of the scale-based questionnaire (i.e. estimate the proportion of variance that is systematic or consistent in a set of test scores). Cronbach Alpha is often used on continuous data using scales (Oxford and Burry-Stock, 1995). Though there is no general agreement on what is accepted as an estimate of internal reliability using Cronbach alpha, 0.7 and above is acceptable (Nunnally, 1978). The internal reliability estimates of the questionnaire items were .73 for metacognitive strategies, .73 for discovery strategies, and .82 for consolidation strategies. These high alpha coefficients indicate that the questionnaire is a reliable for measuring the subjects' use of VLSs.

The inter-rater reliability of the coding scheme of the subjects' TAPs was made by having an independent rater listen to the tapes and judge the subjects' performance according to the given criteria. There were 35 rating matches and 7 near-matches (i.e. within one category on the scale) between the researcher's and the independent rater's judgments. This represents a very high degree of agreement between the tow raters.

CHAPTER FOUR

ANALYSIS OF QUESTIONNAIRE DATA

This chapter presents the analysis of data collected from the questionnaire. It comprises the analysis of (1) metacognitive strategies, (2) discovery strategies, and (3) consolidation strategies. A separate section is given over to the discussion of each type of strategy. Each section will cover both use and evaluation of strategies by Saudi EFL learners, and will conclude with a summary of the overall findings. Tables and bar-charts display findings on both frequency of use and ratings of usefulness of the strategies.

4.1. Metacognitive Strategies

The questionnaire includes twenty different metacognitive strategies aimed at learning L2 vocabulary as follows:

a) Building up a sufficient vocabulary store

1. learning frequent words from published word lists
2. learning frequent words from published word cards
3. learning frequent words directly from a dictionary

b) Studying the English affixation system

4. studying the English affixation system

c) Using English-language media

5. watching TV channels
6. listening to radio programmes
7. reading newspapers
8. surfing the English web-sites
9. making use of on-screen English-Arabic translation

d) Learning vocabulary through reading

- 10. using graded readers
- 11. using controlled reading
- 12. using free reading

e) Ignoring some new words

- 13. ignoring some new words

f) Planning L2 vocabulary revision

- 14. planning L2 vocabulary revision

g) Evaluating L2 Vocabulary knowledge

- 15. evaluating L2 vocabulary knowledge

h) Continuing to study L2 vocabulary over time

- 16. continuing to study L2 vocabulary over time

i) Learning about VLSs and about the nature of L2 vocabulary learning

- 17. learning about VLSs and about the nature of L2 vocabulary learning

j) Social strategies

- 18. interacting with native speakers
- 19. discussing vocabulary learning requirements and problems with teachers
- 20. co-operating with classmates to improve L2 vocabulary

4.1.1. Subjects' self-reported use of metacognitive strategies

The average frequency index for use of metacognitive strategies is 40.25 points. This proved to be marginally lower than the averages for the other two categories of strategy; however the differences are not significant. No individual metacognitive strategy received a frequency index of over 67.5. In fact, seven strategies scored below 25 points. Table 4.1 below shows the subjects' reported use of the individual metacognitive strategies.

Table 4.1 Subjects' reported use of metacognitive strategies⁸

Metacognitive Strategies	Frequency Responses					Mean	Mode
	A*	O	S	R	N		
learning words from a published word list	3	2	10	10	25	24.00	N
learning words from published word cards	1	1	5	4	39	10.5	N
trying to learn directly from a dictionary	16	12	7	10	5	62.00	A
watching TV channels	17	11	15	4	3	67.50	A
listening to radio programmes	7	5	13	18	7	43.50	R
reading newspapers	5	5	17	21	2	45.00	R
surfing the internet	6	5	14	11	14	39.00	N
making use of on-screen English↔Arabic translation	13	15	16	2	4	65.50	S
learning vocabulary through graded reading	0	0	1	12	37	8.00	N
learning vocabulary through controlled reading	1	1	6	18	24	18.50	N
learning vocabulary through free reading	8	13	24	4	1	61.50	S
ignoring some new words	4	9	26	10	1	52.50	S
planning vocabulary revision	3	3	12	11	21	28.00	N
evaluating vocabulary knowledge	1	3	2	9	35	13.00	N
continuing to learn vocabulary over time	4	7	8	17	14	35.00	R
interacting with native speakers of English	13	8	15	12	2	59.00	S
discussing vocabulary learning problems and requirements with a teacher	1	3	10	15	21	24.00	N
co-operating with classmates to improve vocabulary	5	5	17	14	9	41.50	S

* A=always, O=often, S=sometimes, R=rarely, N=never.

4.1.1.1 Building up a sufficient vocabulary store

The questionnaire included three strategies for explicitly building up a basic vocabulary store: (1) learning frequent words from published word lists, (2) learning frequent words from published word cards, and (3) learning frequent words directly from a dictionary.

The first two strategies were found to be infrequently used by the respondents. The strategy of using word lists to build up a sufficient vocabulary store received a low frequency index of 24 points. Several respondents said they do not know any

⁸ The strategies of studying the English affixation system and learning about VLSs and about the nature of L2 Vocabulary learning are missing from the table because, unlike other strategies in the table, they involve 'yes-no' questions (i.e. they do not involve a frequency response).

published word list. Some also said that they lack the basic skills for devising a useful word list. The few subjects who reported using word lists said that they learn directly from the list of defining vocabulary published in some monolingual dictionaries and from other word lists available in appendices of some reading textbooks. Similarly, the strategy of learning frequent words from word cards also gained a low frequency index of 10.5 points; 31 respondents said that they had never used this strategy. A number of respondents, however, maintained that word cards are not suitable for adult learners. Laufer (1997; cited in Leeke and Shaw, 2000) maintains that L2 learners may give up using word lists because they believe that they have reached a proficiency level where learning by exposure is possible.

The strategy of trying to learn directly from the dictionary received a higher frequency index of 62 points. It can be observed from the subjects' comments and interview data that their constant use of monolingual, bilingual (English-Arabic and Arabic-English), and bilingualised dictionaries (both normal and electronic ones) for reading, writing and translation encourages dictionary use. This includes using dictionary illustrations, learning more information about already known words, learning new words, and checking word derivations.

4.1.1.2 Studying the English affixation system

Only half the subjects reported ever having studied English affixes. Those who had studied them reported only having been given a brief introduction to the subject arising from a reading module.

4.1.1.3 Maximising exposure to English media

The questionnaire investigated five strategies for using English-language media for the purpose of vocabulary enlargement. These were watching TV channels, listening to radio programmes, reading newspapers, surfing the internet and making use of on-screen translation. The strategy of watching TV channels was the most frequently used media strategy with a frequency index of 67.5 points. The subjects' replies to a follow-up question about the channel/s that they usually watch show that the majority are news channels, such as the BBC (28 references), CNN (24 references), ABC (2 references), CBC (1 reference), NBC (1 reference), Fox News (4 references), Sky News (3 references), Euro News (3 references), Orbit News Channels (3 references), and The Nile Channel (1 reference). These constitute about 70 % of the references. Some subjects attributed the popularity of news channels to the fact that news broadcasts are easier to understand than other types of programme, because like newspapers they focus on the same recurring issues. Accordingly, movie channels are referred to 14 times only. This may be because, as some subjects pointed out, watching movies requires an advanced level in terms of vocabulary and grammatical knowledge, understanding different accents, knowing the (slight) lexical differences between dialects, and being accustomed to the speed of dialogue in movies. Two subjects said that they usually record movies and watch them a number of times in order to focus on different language aspects. The Saudi English Channel, which offers different programmes including movies and news broadcasts, is referred to 12 times. In general, it seems that the fact that news channels and the Saudi English Channel are free-to-air makes them more popular than movie channels which are usually pay-channels.

The strategy of listening to radio programmes comes third among media strategies, with a frequency index of 43.5 points. The difficulty of picking up an English broadcasting station, the speed of talking, and having limited vocabulary stores are given as reasons for infrequent listening to the radio compared to watching TV channels and reading newspapers. An interesting point observed in the subjects' answers to a follow-up question about the radio stations that they usually listen to is that the vast majority of subjects listen to the news stations of the BBC and/or Voice of America. This is in line with the type of TV channels that most subjects usually watch.

The strategy of reading newspapers received a slightly higher frequency index (45 points). Yet it was remarked by a number of subjects that they find it difficult to read newspapers because they are faced with a large number of new words. In fact, from the researcher's experience as a learner and teacher of English, it can be said that different English newspapers differ considerably in their readability for non-native speakers. *The New York Times* is given by two different subjects as an example of an easy-to-read newspaper. One possible explanation for the relatively low frequency of reading newspapers may be that some subjects usually read newspapers on the web. Reading newspapers when surfing the internet is reported by a number of subjects. A follow-up question asked the subjects what English newspapers they usually read. Some respondents mentioned more than one newspaper. The most commonly read newspapers among the subjects are Saudi English newspapers: *The Arab News* (26 references), *Riyadh Daily* (15 references) and *Saudi Gazette* (9 references). The non-Saudi English newspapers referred to are *The New York Times* (2 references), *The Washington Post* (3 references), *The Guardian* (2 references), *Los Angeles Times*, *US Today*, *Herald Tribune*, *Daily News*, *News Times*, *USA Today*, *Daily Telegraph*, *Gulf*

News, *The Independent*, *The Sun*, *The Mirror*, and *Time Magazine* (one reference each). *Reader's Digest* was referred to by two respondents. The popularity of the Saudi English newspapers can be attributed to their availability. Some respondents who reported reading non-Saudi newspapers said that they usually read them on the internet. In fact, the non-Saudi newspapers are usually available only in the main Saudi cities of Riyadh, Jeddah and Dammam where larger numbers of native speakers of English reside.

The least used media strategy is the strategy of surfing the internet, with a frequency index of 39 points. Unavailability of internet access, large numbers of unknown words, the popularity of Arabic web sites, and being busy with their course modules were given by the subjects as reasons for not frequently surfing the English web sites. The vast majority of the English web sites usually visited by the subjects are chat sites, email service sites and newspapers. A few subjects, however, reported visiting translation and English learning sites.

Making use of on-screen English↔Arabic translation is the second most frequent media strategy with 65.5 points. This may suggest that the majority of subjects prefer to watch translated programmes. However, some subjects criticised this strategy on the grounds that it undermines the learner's focus on listening comprehension.

4.1.1.4 Learning vocabulary through reading

Three reading strategies were investigated in the current study: (1) graded reading, (2) controlled reading (on one topic or similar topics) and (3) free reading.

The strategy of using graded readers received the very low frequency index of 8 points; 25 respondents reported that they never use this strategy. In fact, the 25

respondents who reported using it (5 said ‘sometimes’ and 20 said ‘rarely’) reported that they use graded textbooks. Interview and class discussions revealed that none of the subjects is familiar with graded readers (e.g. the Oxford *Bookworms* Series)

Using controlled reading was more popular. It received a frequency index of 18.5 points. 24 subjects said that they never use it. The use of this strategy appeared to be motivated by mid-term and final exams in translation modules: a few respondents remarked that translation exams usually include political texts from newspapers, so they prepare for the unseen translation exams by focusing on recent political issues in newspapers.

The strategy of using free reading came top with a frequency index of 61.5 points. A higher frequency had been expected for this strategy, but its limited use was explained by the subjects’ comments. They remarked that none of the course modules throughout the previous semesters of their degree had trained them in the necessary skills of free reading or allowed them to practise free reading. Some respondents described the language used in the modules as very academic and limited, thus not an effective preparation for general free reading. The scarcity of interesting books was also mentioned. More importantly, a number of subjects said that the many requirements of the modules made them too busy to practise free reading.

4.1.1.5 Ignoring some new words

Ignoring some new words received 52.5 points. It was initially expected that this strategy would achieve a higher frequency index, but this result as well as the analysis of the think-aloud protocols produced while reading authentic texts (cf. Chapter Five) reveal that the majority of subjects prefer to check every unknown word. Some subjects, however, provided interesting comments that indicated their awareness of both advantages and disadvantages of skipping unknown words. Some

subjects said that they encounter an average of 30-50 new words every day and that it is difficult to check them all. It was also stated that skipping unknown words makes reading less boring. On the other hand, it was remarked by some subjects that they do not skip any new word as it may be important either in the current text or on a future occasion. It is also probable that our subjects, as EFL learners majoring in English, feel that they need to continue to build up their vocabulary store to cope with the variety of texts to which they are exposed. However, it can be also assumed that the subjects use this strategy more frequently in mid-term and final exams, where they are not allowed to use dictionaries.

4.1.1.6 Planning vocabulary revision

The strategy of planning vocabulary revision at programmed intervals received the quite low frequency index of 28 points. A possible explanation may be that to practise this strategy requires special awareness and long-term commitment. Some respondents remarked that the process of following a schedule for revising English vocabulary collapses as soon as it has begun. It can also be observed that this strategy may need the assistance of an experienced teacher, who is not always available to L2 learners. A number of respondents remarked, however, that they revise new words mainly in preparation for mid-term and final exams.

4.1.1.7 Evaluating L2 vocabulary knowledge

The strategy of evaluating L2 vocabulary knowledge was the third least used metacognitive strategy with 13 points only. Some subjects regarded their department as solely responsible for making L2 vocabulary assessment tests while others complained about the high cost of IELTS and TOEFL material in local bookstores. It was significant, though, that some subjects remarked that they had never had

experience of a comprehensive vocabulary test.

4.1.1.8 Continuing to study L2 vocabulary over time

The strategy of continuing to study L2 vocabulary over time involves following a general or detailed plan for learning more words over time. This received a frequency index of 35 points. This low index is in line with the respondents' infrequent use of the strategy of planning L2 vocabulary revision (discussed above), because the latter concerns revising words already learnt in the past, whereas the former concerns planning to learn new words in the future. A number of respondents made it clear that they have no specific plan beyond the requirements of the modules.

4.1.1.9 Learning about VLSs and about the nature of L2 vocabulary learning

The subjects were asked whether they had studied any vocabulary learning strategy or learnt any relevant facts about L2 vocabulary (e.g. size of L2 vocabulary, vocabulary known by native speakers, gradual acquisition of vocabulary by native speakers, L2 vocabulary needed by L2 learners). 28 subjects gave negative responses. The respondents' lack of knowledge about VLSs and about the nature of L2 vocabulary learning is apparent in the several responses of 'never' in the case of strategy use and 'I don't know' in the case of evaluation questions.

4.1.1.10 Social strategies

Interacting with native speakers scored 59 points. This result is against the expectations of the researcher, because of the scarcity of native speakers in Qassim, Saudi Arabia. It can be assumed that some subjects answered the question about this strategy with non-native speakers of English who also do not speak Arabic in mind. This is especially probable given that a number of subjects work in part-time jobs in

local hospitals with doctors and nurses mainly from India and the Philippines. Some subjects' comments on this strategy stressed the fact that the scarcity of native speakers of English in Qassim makes it difficult to apply. Others complained about their lack of confidence and again criticised the department for neglecting speaking skills.

Discussing vocabulary requirements and problems with teachers scored a low frequency index of 24 points, with 15 subjects choosing '*rarely*' and 21 subjects '*never*'. The respondents gave the following reasons for the infrequency of this strategy as follows:

1. not having the courage to discuss L2 vocabulary learning with teachers in class,
2. teachers do not in general encourage students to come forward and discuss their problems,
3. teachers and students are too busy during work hours with their classes,
4. having had a disappointing experience before.

The social strategy of cooperating with classmates to improve L2 vocabulary scored 41.5 points, a lower frequency index than expected. It was initially thought that some modules, especially reading and translation, might encourage cooperation among the subjects with regard to English vocabulary development, and that the subjects might exchange L2 material. The subjects ascribe infrequent cooperation among themselves to three main reasons: (1) lack of willingness to cooperate on the part of other classmates, (2) being busy during classes, and (3) being embarrassed to expose one's own vocabulary level. It can also be assumed that the subjects' lack of awareness about VLSs and lack of interesting material contribute to the lower than expected frequency of this strategy.

4.1.2 Subjects' evaluation of metacognitive strategies

The subjects' evaluation of the metacognitive strategies was significantly higher than their reported use. None of the individual strategies achieved a rating index below 44 points. In fact, thirteen metacognitive strategies received rating indexes over 70 points. The average index for the respondents' ratings of metacognitive strategies is 72.42 points, in spite of the several 'I don't know' responses to a number of strategies. The subjects' ratings of the individual metacognitive strategies are shown in table 4.2 below.

Table 4.2 Subjects' evaluation of metacognitive strategies

Metacognitive Strategies	Evaluation Responses					Mean	Mode
	VU*	U	QU	NU	IDK		
learning words from a published word list	7	17	6	3	17	47.00	U & IDK
learning words from published word cards	5	14	13	2	16	44.00	IDK
trying to learn directly from a dictionary	24	19	5	0	2	81.50	VU
studying the English affixation system	6	10	20	0	14	47.00	QU
watching TV channels	25	21	3	0	1	84.50	VU
listening to radio programmes	21	19	3	0	7	73.50	VU
reading newspapers	28	17	4	0	1	85.50	VU
surfing the internet	18	18	7	0	7	70.00	VU
making use of on-screen English↔Arabic translation	12	17	14	0	7	63.50	U
learning vocabulary through graded reading	34	15	1	0	0	91.50	VU
learning vocabulary through controlled reading	31	16	3	0	0	89.00	VU
learning vocabulary through free reading	32	16	0	0	2	88.00	VU
ignoring some new words	7	11	14	7	11	48.00	QU
planning vocabulary revision	22	17	2	0	9	71.50	VU
evaluating vocabulary knowledge	13	13	3	0	21	48.50	IDK
continuing to learn vocabulary over time	32	14	4	0	0	89.00	VU
learning about VLSs and nature of L2 vocabulary learning	35	12	0	1	2	88.00	VU
interacting with native speakers of English	39	9	0	0	2	91.50	VU
discussing vocabulary learning problems and requirements with a teacher	13	12	10	2	13	55.00	VU & IDK
co-operating with classmates to improve vocabulary	15	25	4	1	5	72.00	U

*VU=very useful, U useful, QU quite useful, NU not useful for current level, IDK I don't know

4.1.2.1 Building up a sufficient vocabulary store

The strategy of learning frequent words from published word lists received a relatively low evaluation of 47 points; 17 respondents selected 'I don't know'. This is consistent with the fact that 25 subjects said that they never use it. The respondents' comments show that they are quite aware of the disadvantages of word lists. It was said that words learnt in word lists are easy to forget and that the learning process takes time. Some respondents also said that maximising exposure to context-based English is better as it is a natural way of learning new words and consolidating known ones. The same can also be said about learning frequent words from published word cards, which scored 44 points. Here, 16 respondents opted for 'I don't know'. This is in line with the total number of respondents (39) who said that they never use this strategy. A considerable number of respondents also remarked that word cards are more suitable for younger learners. Some also said that it would be difficult to design word cards for the large numbers of new words that they encounter every day. Some interviewees also held that word cards have the disadvantage of presenting words without context.

Learning words directly from a dictionary received a much more positive evaluation. The rating for this was 81.5 points, with 24 respondents describing it as very useful and nineteen as useful. The respondents' comments referred to learning frequent words, illustrations, derivatives of known and new and known words, and pronunciation and spelling of new words, especially in monolingual dictionaries.

4.1.2.2 Studying the English affixation system

Studying the English affixation system collected 47 points. The respondents' evaluation of the study of English affixes shows that they are aware of this aspect of

vocabulary learning. Some respondents said that it would be more effective to learn affixes implicitly, since explicit study may cause confusion and also takes time. Some also said that some of the affixes which they had studied explicitly turned out to be infrequent ones. The low evaluation of this strategy may reflect its infrequent use by the respondents. 25 respondents reported that they never study English affixes explicitly.

4.1.2.3 Using English-language media

The strategies of using English-language media were rated more highly by the respondents, scoring an average evaluation of 78.37 points. Watching TV channels obtained 84.5 points. The respondents described it as an interesting means to enjoy using L2 receptively through diverse live English programmes. Watching TV channels is also seen by the respondents as being less demanding in terms of effort and cost. It was also recommended for the purpose of covering important issues, allowing better chances for guessing, and improving pronunciation.

Listening to radio programmes received 73.5 points. It was recommended by a number of respondents as being a natural source for improving pronunciation, learning new words and recycling known ones, especially through repeated news broadcasts.

Reading newspapers achieved the highest rating index among media strategies, with 85.5 points. This high score could be attributed to the fact that the respondents have a positive experience of newspapers through the reading and translation courses. Newspapers are recommended by the respondents for covering current issues, using less frequent words than spoken English on TV or radio, allowing for re-reading and checking the dictionary and being a good source for

controlled reading.

The strategy of surfing English web-sites on the internet achieved 70 points. The respondents mentioned availability and cost as two main reasons for making other media strategies more appealing. A few respondents, however, praised this strategy because they can use instant on-screen instant translation while surfing the internet.

The strategy of making use of on-screen English-Arabic translation scored only 63.5 points. It is one of only two metacognitive strategies whose evaluation index was lower than its index for frequency of use (65.5 points), the other being respondents' lower rating of bilingual dictionaries compared to their reported use. Those who praised this strategy said that it is very useful for correcting the pronunciation of some known words and that it is very useful to record translated programmes and watch them again. But those who criticised it maintained that translated programmes discourage guessing and that it is difficult to catch both the spoken language and the written language at the same time. They also commented that words learnt through translated programmes are easily forgotten. Others held that as untranslated programmes encourage guessing, they are more useful because deeper manipulation through guessing leads to better learning.

4.1.2.4. Learning vocabulary through reading

The three reading strategies also achieved high evaluation indexes. Using graded readers is the most appreciated metacognitive strategy with 91.5 points (along with interacting with native speakers). After being introduced to the concept of graded readers through one of the TAP texts (see appendix eleven, text B) and classroom discussions, the subjects showed great interest in graded readers and

enthusiastically asked the researcher how to obtain them. Similarly, controlled reading achieved a high rating index of 89 points, possibly because the respondents are familiar with this strategy in translation modules, in which they usually translate related texts throughout a whole course (e.g. courses on scientific translation, political translation, and religious translation). Free reading scored a rating of 88 points. According to the respondents' comments and interview data, the main advantage of free reading is freedom from pressure while reading, in terms of both discovering meaning (i.e. they are more free to ignore words) and selecting material.

4.1.2.5 Ignoring some new words

Besides on-screen English-Arabic translation, this is the only metacognitive strategy which obtained a rating index lower than its index of frequency of use (48 and 52.5 points respectively). In fact, ignoring some new words received more responses of 'not useful' than any other metacognitive strategy.

It is difficult to explain either the respondents' low reported use of the strategy or their rating of it, given their need for it. As university students majoring in English they most expected to encounter challenging input on a regular basis. The most likely explanation for the lower rating than use is lack of knowledge about L2 vocabulary (i.e. L2 vocabulary size, graded frequency, learner needs, etc.) and lack of training in reading skills. From their comments and interview data, it appeared that some respondents had made previous unsuccessful attempts which involved ignoring important words. The respondents who evaluated this strategy positively stated that ignoring some new words is necessary to make reading and listening more interesting, and that not every new word is important. Other explanations may be that as the subjects are exposed to diverse types of texts, they believe that they need to know every new word for future reading; or that they believe that they are still in the

process of building up a sufficient L2 vocabulary store. The relatively low rating index of the strategy among Saudi EFL learners is consistent with Schmitt's (1997) finding that the least helpful discovery strategy according to Japanese EFL learners is skipping or passing over new words.

4.1.2.6 Planning vocabulary revision

The subjects' evaluation of the strategy of planning L2 vocabulary revision received a positive rating of 71.5 points. The respondents' comments focused on two points. First, a number of respondents said that they forget many previously learned words because of not following a revision plan. Second, some respondents also mentioned their need to revise new vocabulary for mid-term and final exams. Some respondents, however, remarked that they prefer to maximise exposure to the English media and printed material, because it is a more natural use, less demanding and more interesting. Their comments are in line with their high rating of both reading and media strategies.

4.1.2.7 Evaluating L2 vocabulary knowledge

Assessing L2 vocabulary knowledge obtained the lowest rating of usefulness with 48.5 points, mainly because 21 respondents selected 'I don't know'. This may reflect the respondents' lack of understanding of its importance and their infrequent use of the strategy: 39 respondents said that they never use it. As a matter of fact, after undergoing a graded vocabulary test sample from Nation (2001) on the 1,000, 2,000, 3,000 most frequent words in English, the subjects showed great interest in such tests and were keen to obtain more samples.

4.1.2.8 Continuing to study L2 vocabulary over time

The strategy of continuing to study L2 words over time got a very positive evaluation index of 89 points. Some respondents remarked that the main problem of following a specific plan to learn more vocabulary is that they are usually busy with the requirements of the course modules. Some respondents also remarked that they find the vocabulary used in the course modules a sufficient source for learning new words, so that they don't need to make extra efforts, especially following a specific plan to improve their vocabulary. In other words, improving L2 vocabulary is a by-product of fulfilling the requirements of the course modules.

4.1.2.9 Learning about VLSs and nature of L2 vocabulary learning

Improving one's knowledge about the nature of L2 vocabulary learning in general and VLSs in particular achieved a high rating index with 88 points. This may be due in part to the fact that the researcher presented some facts about English vocabulary and some strategies (e.g. defining vocabulary in recent monolingual dictionaries, graded readers). The respondents' comments indicated that being introduced to VLSs and being provided with some basic facts about L2 vocabulary may produce positive results in terms of both strategy use and evaluation.

4.1.2.10 Social strategies

The social strategies achieved significantly different rating indexes. The social strategy of interacting with native speakers achieved the highest rating index among all metacognitive strategies with 91.5 points (along with graded reading). Its main advantages, according to a number of respondents, are allowing extensive, natural

practice of L2 receptively and productively, recycling known words, learning more frequent and more useful words and building confidence.

The strategy of discussing vocabulary learning requirements and problems with teachers received a moderate rating index of 55 points. In fact, the respondents' rating of this strategy is distributed fairly equally across the five rating responses. 13 described it as very useful, 12 as useful, 10 as quite useful, 2 as slightly useful and 13 chose 'I don't know'. This may reflect the respondents' different personalities in terms of social skills. Some respondents maintained that this strategy is useful only if a knowledgeable teacher is available and willing to help. A possible explanation for infrequent interaction with teachers is that teachers and students are too busy during lectures to discuss vocabulary issues, usually seen as an aspect of autonomous learning. Possibly also they believe that there are better alternatives.

Co-operating with classmates to improve one's vocabulary received a rating index of 72 points. Some respondents reported that they find exchanging useful material with other classmates very useful for improving L2 in general and vocabulary in particular. Others maintained that they prefer to learn L2 vocabulary on their own.

4.1.3 Summary of findings on metacognitive strategies

1. Six metacognitive strategies were found to be used quite frequently, gaining frequency indexes of over 50 points. These comprise (in descending order) the strategies of (1) watching TV channels (67.5 points), (2) making use of on-screen translation (65.5 points), (3) trying to learn directly from the dictionary (62 points), (4) learning vocabulary through free reading (61.5 points), (5) interacting with native speakers of English (59 points), and (6) ignoring some new words (52 points).
2. Five strategies occupy a middle position in terms of frequency, receiving between 35 and 45.5 points. These comprise (in descending order) the strategies of (1) reading newspapers (45 points), (2) listening to radio programmes (43.5 points), (3) co-operating with classmates to improve L2 vocabulary (41.5 points), (4) surfing the internet (39 points), and (5) continuing to study L2 vocabulary over time (35 points) .
3. The more vocabulary-specific strategies and those that require hard work and dedication achieved low frequency indexes of below 30 points. These comprise (in descending order) the strategies of (1) planning L2 vocabulary revision (28 points), (2) discussing vocabulary learning problems with teachers (24 points), (3) learning frequent words from published word lists (24 points), (4) learning vocabulary through controlled reading (18.5 points), (5) evaluating L2 vocabulary knowledge (13 points), (6) learning frequent words from published word cards (10.5 points), and (7) learning vocabulary through graded reading (8 points).
4. Eight strategies gained evaluation indexes of over 80 points. These comprise (in descending order) the strategies of (1) learning vocabulary through graded reading (91.5 points), (2) interacting with native speakers of English (also 91.5 points), (3)

learning vocabulary through controlled reading (89 points), (4) continuing to learn L2 vocabulary (89 points), (5) learning vocabulary through free reading (88 points), (5) reading newspapers (85.5 points), (6) watching TV channels (84.5 points), and (7) trying to learn directly from a dictionary (81.5 points). Four of these seven strategies are reading strategies. The media strategy of watching TV channels appropriately joins this group because the respondents' comments and interview data show that watching TV channels is highly appreciated by Saudi EFL learners with regard to improving L2 vocabulary. The high evaluation of the reading and media strategies as well as the strategy of interacting with native speakers is a strong indication that Saudi EFL learners majoring in English prefer to improve their English vocabulary through context-based strategies.

5. Four strategies managed to achieve rating indexes over 70 points. These included (in descending order) the strategies of (1) listening to radio programmes (73.5 points), (2) co-operating with classmates to improve L2 vocabulary (72 points), (3) planning L2 vocabulary revision (71.5 points), and (4) surfing the internet (70 points).
6. The strategies rated least helpful are (in descending order): (1) evaluating vocabulary knowledge (48.5 points), (2) ignoring some new words (48 points), (3) learning frequent words from published word lists (47 points), and (4) learning frequent words from published word cards (44 points). These results are, in fact, quite unexpected, especially in the first two cases.
7. The majority of subjects seem to evaluate the context-based strategies more positively than the decontextualised strategies of using word lists and word cards. Despite the fact that the respondents are more familiar with word lists and word cards as two strategies for building up a sufficient vocabulary store, they

considered the strategy of graded readers more useful in terms of increasing vocabulary size. Similarly, the respondents' evaluation of media and reading strategies is significantly higher than their evaluation of the more explicit strategies of planning revision and continuing to learn vocabulary over time following a specific plan. This may reflect the respondents' long experience with contextualised and decontextualised vocabulary learning over the previous three years (on average). Leeke and Shaw (2000) find that personal learning style, beliefs, motivation (e.g. intrinsic motivation: not having time, being lazy), stage of learning (e.g. moving from focus to reliance on exposure), affect vocabulary recording behaviour. This result of low use and evaluation indexes of using word lists or word cards by Saudi EFL learners conflicts with the results of some previous studies which report that Asian L2 learners (and possibly Arab L2 learners) strongly believe in memorisation strategies (Gu and Johnson, 1996).

8. A number of strategies failed to receive high rating indexes because a considerable proportion of respondents chose not to evaluate them because these strategies were new to them. These included the strategies of learning words from word lists, learning words from word cards, using avoidance strategies, evaluating L2 vocabulary, discussing vocabulary learning problems and requirements with teachers and continuing to learn L2 vocabulary over time. It is, then, possible that introducing learners to these strategies may increase their perception and consequently their use.
9. With the exception of seven strategies, most of the metacognitive strategies which achieved high frequency indexes achieved high rating indexes and vice versa (see figure 4.1 below). The exceptional strategies gained significantly low frequency indexes but received significantly higher evaluation. These comprise (in

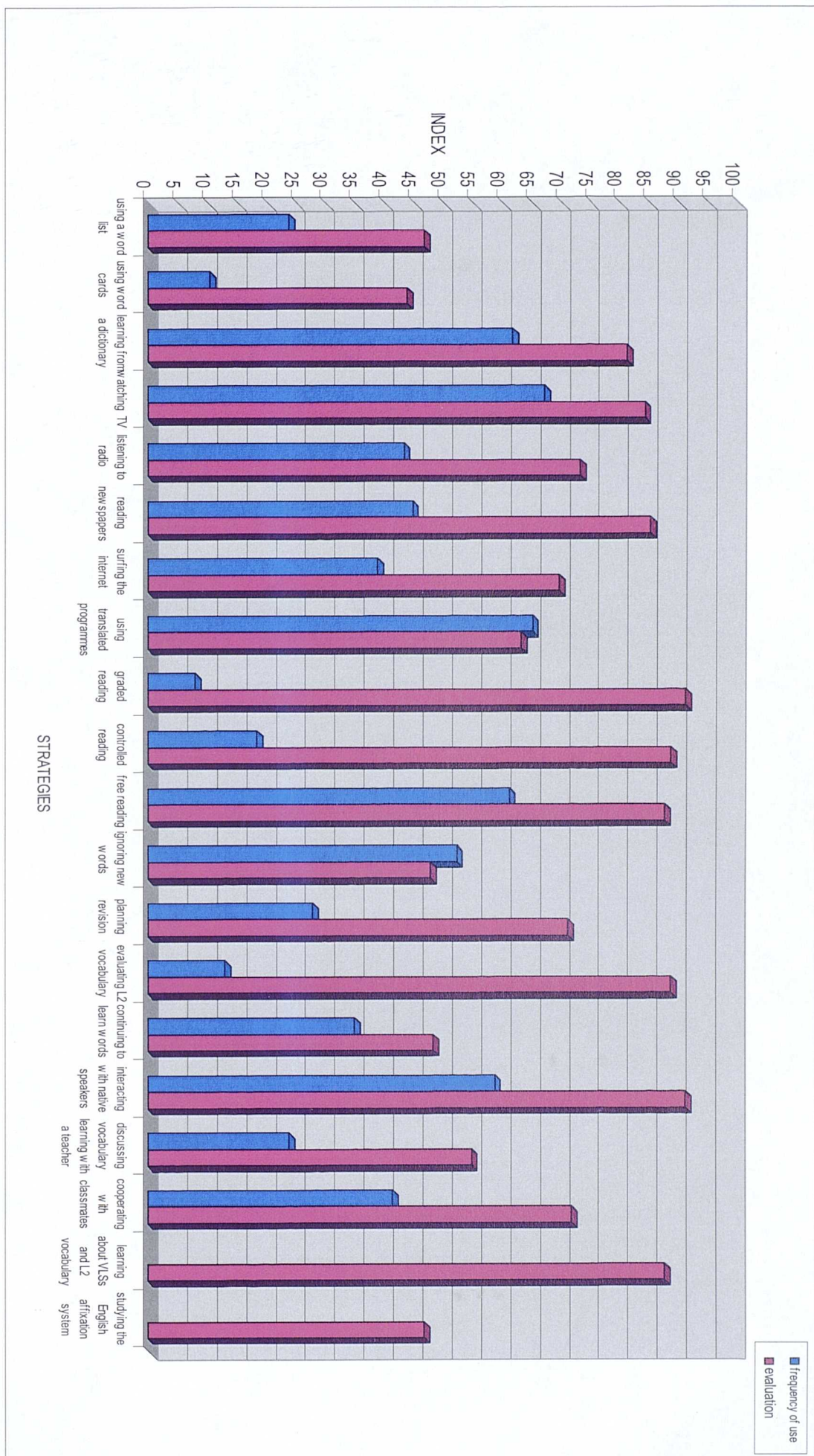
descending order of index difference) the strategies of (1) learning vocabulary through graded reading (8 points on use and 91.5 on evaluation), (2) learning vocabulary through controlled reading (18.5 points on use and 89 on evaluation), (3) planning L2 vocabulary revision (28 points on use and 71.5 on evaluation), (4) reading newspapers (45 points on use and 85.5 on evaluation), (5) listening to radio programmes (43.5 points on use and 73.5 on evaluation), (6) surfing the internet (39 points on use and 70 on evaluation), and (7) co-operating with classmates to improve L2 vocabulary (41.5 points on use and 72 on evaluation).

10. Metacognitive strategies received higher overall evaluation than the other two categories. They also showed the greatest difference between frequency and evaluation ratings, that is 32.17, the difference between 72.42 and 40.25. The index means for evaluation and frequency of the three categories are displayed in table 4.3 below.

Table 4.3 Index means for evaluation and frequency of the three categories

Category	Frequency mean	Evaluation mean	difference
Metacognitive strategies	72.42 points	40.25 points	32.17
Discovery strategies	57.80 points	42.11 points	15.69
Consolidation strategies	63.57 points	40.28 points	23.29

Figure 4.1 Use and evaluation of metacognitive strategies by Saudi EFL learners majoring in English in Saudi Arabia



4.2 Discovery Strategies

The questionnaire included fourteen discovery strategies as follows:

a) Using dictionaries

1. using English-Arabic dictionaries
2. using English-English dictionaries
3. using Arabic-English dictionaries
4. using electronic dictionaries
5. using vocabulary sections or glossaries
6. using instant on-screen computer translation programmes
7. using the Microsoft Word thesaurus feature

b) Contextual guessing

8. contextual guessing

c) Analysing word units

9. analyzing word units

d) Social strategies

10. seeking help from a teacher (to paraphrase, give a synonym, an antonym, a L1 translation)
11. seeking help from a classmate
12. discovering meanings of new words through group work

4.2.1 Subjects' reported use of discovery strategies

The overall mean for this category in terms of frequency of use is 42.11, slightly higher than the category means for both metacognitive and consolidation strategies. It appears that Saudi EFL learners use dictionaries and contextual guessing fairly often, whereas computer and social activities are rarely used. Table 4.4 below shows the respondents' self-reported use of the discovery strategies. None of the strategies yielded unexpected results.

Table 4.4 Subjects' reported use of discovery strategies

Discovery Strategies	Frequency Responses					Mean	Mode
	A*	O	S	R	N		
using English-Arabic dictionaries	23	17	5	3	2	78.00	A
using English-English dictionaries	8	12	16	13	1	56.50	S
using Arabic-English dictionaries	5	9	12	11	13	41.00	N
using electronic dictionaries	22	10	11	3	4	71.50	A
using vocabulary sections or glossaries	2	3	9	15	21	25.00	N
using instant on-screen computer translation	3	3	5	10	29	20.50	N
using the <i>Microsoft Word</i> thesaurus feature	3	2	6	8	31	19.00	N
contextual guessing	16	12	17	4	1	69.00	S
analysing word units	1	5	12	22	10	32.50	R
seeking help from a teacher	0	3	14	15	18	26.00	N
seeking help from a classmate	7	12	20	8	3	56.00	S
discovering meanings of new words through group work	1	5	17	11	16	32.00	S

A=always, O=often, S=sometimes, R=rarely, N=never.

4.2.1.1 Using Dictionaries

The subjects' responses indicate that the strategies involving referring to dictionaries are more popular than other discovery strategies. Consulting a bilingual dictionary is the most frequent strategy with a frequency index of 78 points. The subjects who commented on this strategy largely agreed that they tend to use bilingual dictionaries most often because such dictionaries save time and provide clearer concepts of unknown words than monolingual dictionaries, especially since they usually encounter a large number of new words every day. This result may also be attributed to the availability of bilingual dictionaries, the learners' probable need to look up more words in the definitions of monolingual dictionaries, and the instant explanation of the meaning in bilingual dictionaries. There is a follow-up question about the type of bilingual dictionary that the subjects usually use. The subjects' answers to this question show that they use different types of bilingual dictionaries, usually preferring pocket or machine dictionaries in class whereas larger dictionaries

are used at home. In addition, the majority of subjects reported using more than one dictionary.

Table 4.5 below shows the number of subjects using each type of dictionary.

Table 4.5 Types of dictionaries used by the respondents

Dictionary used	No. of subjects
a large dictionary + a pocket dictionary	10
a large dictionary + a bilingualised dictionary	2
a large dictionary + a pocket dictionary + an electronic dictionary	5
a large dictionary only	4
an electronic dictionary only	7
a pocket dictionary + an electronic dictionary	7
a large dictionary + an electronic dictionary	2
a pocket dictionary only	6
an electronic dictionary + a bilingualised dictionary	1

The *Oxford English-Arabic Reader's Dictionary* (a pocket dictionary) emerged as the dictionary most frequently used by the majority of subjects. Only three subjects said that they use the *Oxford Word Power Dictionary*. Bilingualised dictionaries were not popular among the subjects of this study. Only three subjects reported using them.

Using monolingual dictionaries received a moderate frequency index of 56.5 points. More frequent use of a bilingual dictionary is likely to result in less frequent use of a monolingual dictionary. Consulting a monolingual dictionary is the strategy least used by Japanese EFL learners in Nakamura's (2000) study. The higher frequency of using monolingual English-English dictionaries by Saudi EFL learners can be explained by the fact that, as university students majoring in English, they are more aware of the advantages of monolingual dictionaries and/or are asked by some course leaders to have all types of dictionary, especially in translation classes. In addition, the fact that the popular portable electronic dictionaries can provide a monolingual dictionary function may have allowed them to use monolingual dictionaries more frequently.

Arabic-English dictionaries are the least frequently used type of dictionary with a frequency index of 41 points. This low frequency can be explained by the fact

that Arabic-English dictionaries are mostly used for Arabic-English translation activities and also for essay writing. It is also probable that the infrequent use of Arabic-English dictionaries is due to lack of opportunity for communication in English whether inside or outside the university, which might necessitate reference to an Arabic-English dictionary.

Using electronic dictionaries received 71.5 points. The use of electronic dictionaries seems to have overlapped with using both bilingual and monolingual dictionaries. Their frequent use is justified by the respondents in that they are easy to carry around and that they provide all types of dictionaries (bilingual, monolingual, technical) as well as pronunciation.

Using vocabulary sections or glossaries scored a low frequency index of 25 points. 21 respondents reported that they never use vocabulary sections or glossaries. This low frequency can be attributed to the fact that vocabulary sections or glossaries are usually found in literature books. Another explanation may be that the definitions in such glossaries are in unsimplified English.

The two computer-assisted reference sources also received low frequency indexes. The frequency index of using instant on-screen computer translation programmes is 20.5 points. Using the *Microsoft Word* thesaurus received the lowest frequency index among all discovery strategies with 19 points only. These two discovery sources are, in fact, the two least frequently used discovery strategies. They received more 'never' responses than any other discovery strategy (29 and 31 'never' responses, respectively).

4.2.1.2 Contextual guessing

The strategy of contextual guessing scored 69 points. The expectedly high score for this strategy can be related to the fact that the respondents, being university

students majoring in English, are constantly faced with a large number of new words. It is also possible that the respondents answered this question having in mind the dictionary strategy of making a preliminary guess before looking-up a new word. If this was the case, then this result is consistent with the frequent use of dictionaries. In fact, some respondents said that even if they successfully guess the meaning of a new word they have to consult a dictionary in order to check its pronunciation. This is because their receptive use of L2 is mostly through written texts, when they also need to learn the pronunciation. Perhaps, it can be assumed then that Saudi EFL learners also consult a dictionary to check the spelling of a new word correctly guessed at in a spoken text. The subjects' use of the strategy of guessing will be looked into in more detail in the following chapter, the analysis of our subjects' TAPs⁹. However, a number of respondents maintained that contextual guessing is sometimes the only available means for dealing with a new word, especially in mid-term and final exams where using a dictionary is not allowed.

4.2.1.3 Analysing word units

With a low frequency index of 32.5 points comes the strategy of analysing word units. The infrequent use of this strategy is appropriately justified by some respondents on the grounds that only a small proportion of new words are compound or affixed words whose roots and affixes are already known. This result is, however, also in line with the frequent use of dictionaries by the respondents.

4.2.1.4 Social strategies

With the exception of the strategy of asking a classmate, the social strategies failed to achieve high frequency indexes. Seeking help from a teacher by, for

⁹ The TAPs will be used to assess the subjects' vocabulary knowledge and their use of discovery strategies.

example, asking him to paraphrase a new word, give a synonym, an antonym or a L1 translation or put a new word into a sentence received a low frequency index of 26 points. The mode for this strategy is '*never*'. Some subjects said that their teachers are too busy during a class to allow them to ask about vocabulary items. Others also admit that they do not like to expose their vocabulary level to their teachers and classmates. The strategy of seeking help from a teacher was the fourth least frequent discovery strategy in general and the least frequent social strategy in particular. This confirms the findings of O'Malley *et al.* (1985) and Schmitt (1997).

The strategy of discovering the meaning of new words through group work received a slightly higher index with 32 points. This higher index can be attributed to the fact that our subjects are sometimes asked to work in groups in translation and reading activities. The low frequency of working in groups is consistent with previous research findings (e.g. Reid, 1987; Hyland, 1993; Nakamura, 2000; Ahmed, 1988; Schmitt, 1997; Kudo, 1999).

The most frequent social strategy was seeking help from a classmate (56 points). It can be assumed that this higher frequency is because seeking help from a classmate is less formal than seeking help from a teacher or working in a group; it can be done at any time and in any place. It can even be easier and quicker than consulting a dictionary, especially if a cooperative classmate is always available to help. In seeking help from a classmate, subjects often ask for a L1 equivalent. A follow-up question asked the respondents about the type of information they usually seek from a classmate. Their responses largely concur: they seek respectively L1 translation, pronunciation and spelling. The high frequency of seeking help from a classmate is generally consistent with Nakamura's (2000) finding that Japanese EFL learners across proficiency levels more often ask classmates for Japanese translations.

Moreover, Nakamura obtained lower scores for asking Japanese teachers or classmates for information other than Japanese translation (e.g. English synonyms or paraphrase, example sentences). Asking classmates for meaning is also observed in Schmitt's (1997) study to be one of the strategies most frequently used by Japanese EFL learners. Nakamura's explanation of his finding also applies to the case of Saudi EFL learners in that their classmates are not native speakers of English. This is also consistent with the popular use of bilingual dictionaries.

The low frequency mean for social strategies may be attributed to the fact that learning vocabulary does not necessarily require seeking help from others where using a dictionary or listening to teacher's explanations are easier (Kudo, 1999). Previous studies (Chamot *et al.*, 1987; Schmitt, 1997; Gu and Johnson, 1996; Nakamura, 2000) report that L2 learners prefer to go for the more independent strategies first, rather than trying to seek help from a classmate or a teacher.

4.2.2 Subjects' evaluation of discovery strategies

As with metacognitive strategies, the subjects' evaluation of discovery strategies was higher than their reported use. The mean index for the respondents' evaluation of this category is 57.8 points. The subjects' low evaluation of the two computer strategies and the strategy of using vocabulary sections or glossaries brought the mean down. The subjects' evaluation of individual discovery strategies is shown in table 4.6 below.

4.6 Subjects' evaluation of discovery strategies

Discovery Strategies	Evaluation Responses					Mean	Mode
	VU*	U	QU	NU	IDK		
using English-Arabic dictionaries	15	20	10	4	1	72.00	U
using English-English dictionaries	28	17	3	0	2	84.50	VU
using Arabic-English dictionaries	6	18	12	3	11	52.50	U
using electronic dictionaries	16	19	10	1	4	71.00	U
using vocabulary sections or glossaries	4	14	7	0	25	36.00	DK
using instant on-screen computer translation programmes	4	6	13	6	21	33.00	DK
using the Microsoft Word thesaurus icon	3	12	7	2	26	32.00	DK
using guessing strategies	14	25	8	0	3	73.50	U
analysing affixes and roots	4	11	24	2	9	49.50	QU
seeking help from a teacher	12	23	5	2	8	64.50	U
asking your classmates about the meaning of new words	12	22	12	3	1	70.50	U
discovering meanings of new words through group work	10	18	8	1	13	55.50	U

VU very useful, U useful, QU quite useful, NU not useful for current level, IDK I don't know

4.2.2.1 Using dictionaries

Using English-Arabic dictionaries is one of two discovery strategies that received evaluation indexes lower than their indexes of reported use, the other being use of electronic dictionaries. It received 78 points on use and 72 points on evaluation. Monolingual dictionaries received the highest evaluation index with 84.5 points. The high rating index of this strategy can be seen as a strong indication of respondents' awareness of how useful such dictionaries are and of their willingness to use them more frequently. When explicitly asked which type of dictionary they think is more useful, 29 respondents recommend monolingual dictionaries. Bilingual dictionaries are held to be more useful by 8 respondents only. However, four subjects stated that both are equally useful and need to be used in a complementary way. Below are some interesting comments by the subjects:

1. 'The monolingual dictionary is more useful because it makes you automatically think in English';
2. 'Monolingual dictionaries train you in guessing';

3. 'The monolingual dictionary is more useful because it allows learners to learn more than one word and it provides simple examples. In addition, monolingual dictionaries provide more information about a word's register, pictures, explanations and appendices';
4. 'Monolingual dictionaries are more useful because they help me consolidate previously learnt words';
5. 'They are especially good for providing authentic example phrases and sentences';
6. 'Monolingual dictionaries provide more information than bilingual ones.'

These and other comments by the respondents clearly show that they are quite well aware of the advantages of monolingual dictionaries and that they need to be encouraged to use them without time constraints. The respondents who valued bilingual dictionaries more agree unanimously on their time-saving aspect. Though they praised bilingual dictionaries for saving time and providing clearer concepts, the vast majority of the respondents criticised bilingual dictionaries in that they provide less information than monolingual ones and that they discourage using and thinking in English. The criticism against monolingual dictionaries focused mainly on encountering more unknown words in the definitions and on the fact that they take more time to read. This suggests that the respondents are not aware of the feature of limited defining vocabulary used in some recent monolingual learner dictionaries. Thus, it may be assumed that introducing Saudi EFL learners to monolingual dictionaries with controlled defining vocabulary will change their perception and consequently increase their use. The significant difference between the indexes of use and evaluation of monolingual dictionaries by Saudi EFL learners is generally consistent with the difference between using and rating monolingual dictionaries by Japanese learners in Schmitt's (1997) study. Schmitt reports that only 35% of

respondents reported using a monolingual dictionary whereas 77% described it as helpful.

The two computer-assisted discovery strategies, using instant on-screen computer translation programmes and using the *Microsoft Word* thesaurus, are the least recommended discovery strategies by the subjects with frequency indexes of 33 points and 32 points respectively. It should be noted, however, that a considerable number of subjects did not evaluate these two strategies (i.e. selected 'I don't know'). This may indicate that introducing them to these strategies and training them in how to make effective use of them may change their opinion about their usefulness.

Using vocabulary sections or glossaries also received a low evaluation index (36 points) with the majority of the subjects selecting 'I don't know'. This corresponds to the 25 'never' responses to the use of this strategy. It can also be explained by the fact that vocabulary sections and glossaries are not always available or if available, are in English, or are not known to the learner. Thus, they will not be used by the subjects, who usually prefer to use their bilingual dictionaries.

The subjects' responses show that electronic dictionaries are commonly used, though with marginally lower evaluation ratings (71.5 points for use and 71 points for perception). This is the other discovery strategy which received a lower index for rating than for use. The respondents were asked about their evaluation of electronic dictionaries in terms of advantages and disadvantages. Their responses demonstrate almost unanimous agreement that electronic dictionaries are attractive because they offer all types of dictionary (monolingual, English-Arabic, Arabic-English), save time, provide pronunciation and are easier to carry around. However, most of their criticism against electronic dictionaries is focused on the following points:

1. They do not support word memory because the information sought is found quickly allowing no time for deep processing.
2. They are expensive.
3. They do not provide examples.
4. They do not allow checking of the words before and after as in paper dictionaries.
5. They may present technical problems.

In fact, the most obvious criticism noted by the respondents against using electronic dictionaries was that quick information-supply does not aid word recall. The proverb '*Easy come, easy go*' was quoted by a several respondents.

The Arabic-English dictionaries received a reasonable rating index of 52 points. This type of dictionary is described as useful for writing and translation exercises. But they are criticised for causing confusion as they provide several L2 equivalents where it is not always clear which English equivalent is more suitable to the context. Some respondents comment that it is necessary to double check the listed English equivalents in another monolingual or bilingual dictionary (cf. Scholfield, 1997).

4.2.2.2 Contextual guessing

Guessing was the second most rated strategy, with an index of 73.5 points. The respondents described it as very important for dealing with the many new words that they encounter every day and for dealing with unknown words that they meet in mid-term and final exams. Some also stated that it is an important preliminary step before consulting a dictionary.

4.2.2.3 Analysing word units

Analysing word units received a rating index of 49.5 points. The respondents' comments are quite interesting. Some said that using this strategy alone might sometimes be misleading and that it is useful by itself only if the context supports the guess. Several subjects said, however, that they prefer to check the dictionary afterwards.

4.2.2.4 Social strategies

Social strategies seem to be quite appealing to the subjects. Asking a classmate was judged as the most useful social strategy, whereas the least useful social strategy is working in a group. The positive index of 64.5 points for seeking help from a teacher had not been expected. Discussion with three teaching members had revealed that Saudi EFL learners prefer not to seek help from their teachers because this is not usually accepted by teachers themselves. However, this relatively positive evaluation may be because the respondents expect teachers to provide rich information on new words or because some respondents had had an encouraging experience with a cooperative teacher. In contrast, the strategy of discovering meanings of new words through group work received quite a low rating index of 55.5 points. The subjects' comments indicated that this strategy is not as useful as the other social strategies because group discussions are usually in Arabic and dominated by one or two members. They also remarked that working in a group is restricted almost entirely to translation activities.

4.2.3 Summary of findings on discovery strategies

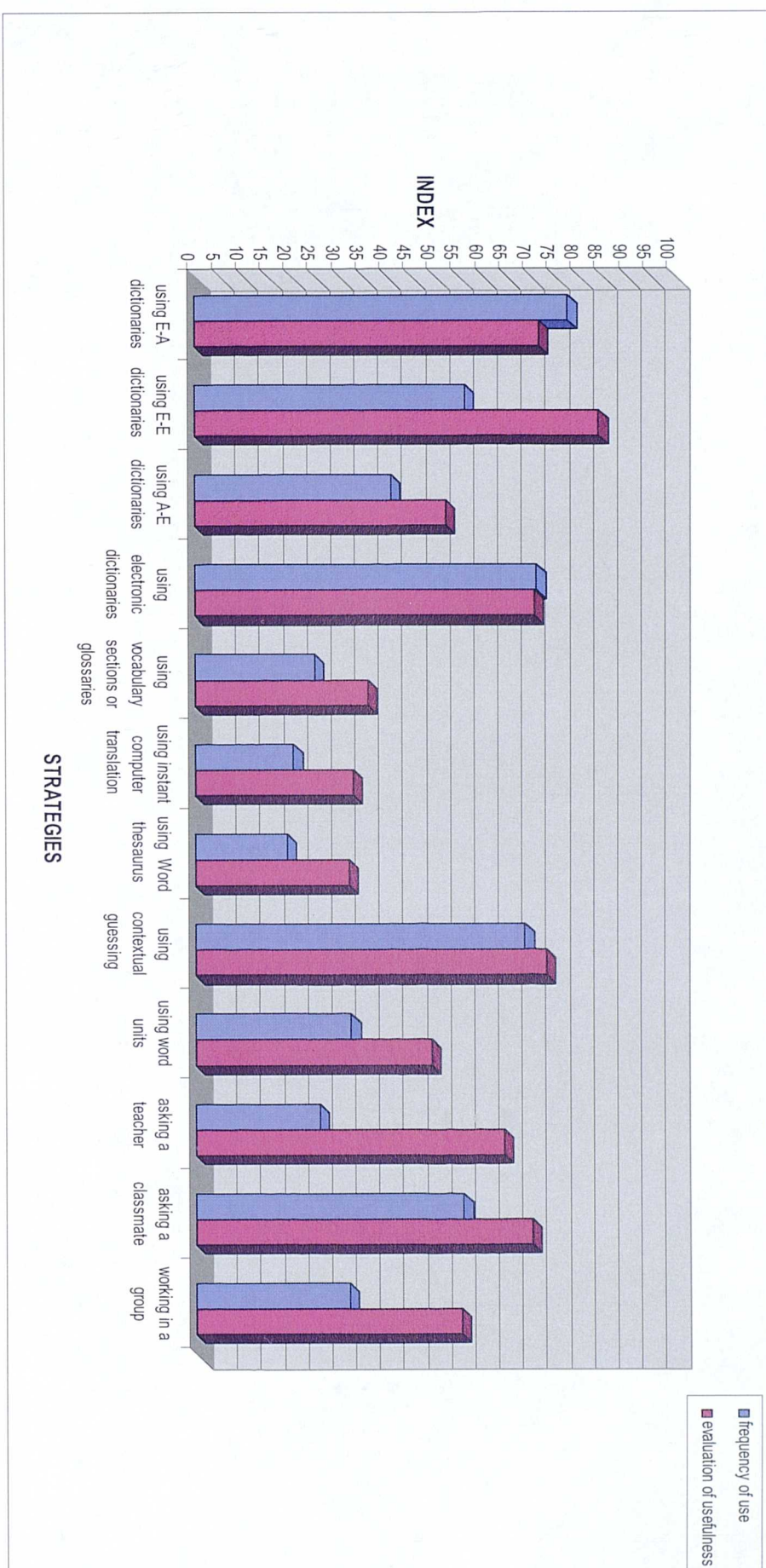
1. The five most frequently used discovery strategies used by Saudi EFL learners are (in descending order): (1) using English-Arabic dictionaries (78 points), (2) using electronic dictionaries (71.5 points), (3) using contextual guessing (69 points), (4) using English-English dictionaries (56.5 points), and (5) seeking help from a classmate (56 points). This finding, in general, corresponds to Schmitt's (1997) finding that the discovery strategies most frequently used by Japanese EFL learners are using bilingual dictionaries (85% of the respondents), guessing from context (74%) and asking classmates for meaning (73%)¹⁰. The high frequency of contextual guessing also confirms Nakamura's (2000) finding that guessing the meaning from the context is the second most used word-attack strategy by Japanese EFL learners.
2. The five most helpful strategies are (in descending order): (1) using English-English dictionaries (84.5 points), (2) using guessing strategies (73.5 points), (3) using English-Arabic dictionaries (72 points), (4) using electronic dictionaries (71 points), and (5) seeking help from a classmate (70.5 points). This list is also quite similar to Schmitt's (1997) results. Schmitt asked Japanese EFL learners to rate the five most helpful discovery strategies. Their responses produced the following list: (1) 'using a bilingual dictionary', (2) 'using a monolingual dictionary', (3) 'asking teachers for a paraphrase or synonyms', (4) 'guessing from textual context' and (5) 'analysing pictures of gestures'.
3. With the exception of the strategies of using English-Arabic dictionaries and using electronic dictionaries, all other discovery strategies received higher evaluation indexes than those of their reported use (see figure 4.2 below). Most strategies

¹⁰ For a full report on the results of use and evaluation of Schmitt's study see appendix seven.

received slightly higher evaluation points, with clearly marked differences in social strategies.

4. The overall evaluation mean for discovery strategies was higher than that of their reported use. The figures are 42.11 points for reported use and 57.80 points for evaluation. The mean index for the respondents' evaluation of discovery strategies is lower than both other categories. The category is also lower in terms of difference between category frequency and evaluation means (cf. table 4.3, p.166).

Figure 4.2 Use and evaluation of discovery strategies by Saudi EFL learners majoring in English



4.3 Consolidation Strategies

The consolidation strategies investigated in the current study consist of memory and cognitive strategies. Memory strategies comprise 12 strategies as follows:

1. using pictures/imagery
2. using the keyword method
3. using semantic feature grids
4. using semantic maps
5. using scales for gradable words
6. learning multi-word units
7. noting a new word in the context of a sentence or a phrase
8. studying the spelling of new words
9. studying the pronunciation of new words
10. connecting a word to a personal experience
11. connecting a new word to its synonyms or antonyms
12. associating a new word with its coordinates

Nine cognitive strategies are identified as follows:

1. verbal repetition
2. written repetition
3. repeated listening to a tape-recorded story
4. repeated listening to a word list
5. repeated listening to other material
6. taking vocabulary notes
7. designing a word list
8. designing flash cards
9. using revision materials

4.3.1 Subjects' self-reported use of consolidation strategies

The subjects' self reported use of consolidation strategies gives a mean index of 42.28 points, which is generally in line with their reported use of both metacognitive and discovery strategies (40.25 and 42.11 respectively). The memory and cognitive strategies received almost the same frequency means (40.16 points and 40.44 points respectively). Table 4.7 below shows the subjects' reported use of consolidation strategies.

Table 4.7 Subjects' reported use of consolidation strategies

consolidation strategies	Frequency Responses					Mean	Mode
	A*	O	S	R	N		
using pictures/imagery (mem)	0	2	18	22	8	32.00	R
using the keyword method (mem)	5	3	4	11	27	24.00	N
using semantic feature grids (mem)	0	3	2	8	37	10.50	N
using semantic maps (mem)	1	1	6	7	35	13.00	N
using scales for gradable words (mem)	2	2	6	13	27	19.50	N
learning multi-word units (mem)	4	10	13	11	12	41.50	S
noting a new word (or new words) into a sentence or a phrase (mem)	8	5	24	10	3	51.00	S
studying the spelling of new words (mem)	11	18	14	5	2	65.50	O
studying the pronunciation of new words (mem)	24	12	7	4	2	76.00	A
connecting a word to a personal experience (mem)	14	10	10	9	7	57.50	A
connecting a new word to its synonyms or antonyms (mem)	9	8	21	10	2	56.00	S
associating the new word with its coordinates (mem)	5	6	13	7	19	35.50	N
verbal repetition (cog)	17	8	14	9	2	64.50	A
written repetition (cog)	12	7	14	13	4	55.00	S
repeated listening to a tape-recorded story (cog)	9	4	11	18	8	44.00	R
repeated listening to a tape-recorded word list (cog)	0	2	2	5	41	7.50	N
repeated listening to other tape-recorded material (cog)	0	0	2	14	34	9.00	N
taking vocabulary notes (cog)	17	19	8	5	1	73.00	O
designing a word list (cog)	7	6	9	8	20	36.00	N
designing flash cards (cog)	2	2	1	6	39	11.00	N
using revision materials (cog)	10	17	14	9	0	64.00	O

A= always, O=often, S= sometimes, R= rarely, N= never.

The first memory strategy of using pictures/imagery received a low frequency index of 32 points; 18 responses stated that they ‘rarely’ use it. Its low use can be justified in that the respondents constantly encounter such a large number of new words that it would be difficult for them to use pictures or images in each case. Those who reported using this strategy stated that they usually use the dictionary illustrations and never try to draw a picture of a new word. It seems, however, that the respondents do not differentiate between using images in their minds and drawing or using an actual picture.

Similarly, the keyword method received a low frequency index of 24 points; 27 respondents reported that they never use it. Its infrequent use agrees with previous research findings (e.g. O’Malley *et al.*, 1985; Chamot *et al.*, 1987, Nakamura, 2000). Most of the respondents criticised the keyword method because it would be difficult, if not impossible, to use the keyword method with all new words. A considerable number of subjects (27 out of 50) said that they had never heard of this strategy before. Some subjects also maintained that the keyword method is not suitable for their age. Others said that this method takes time, especially as they encounter many new words every day. This criticism supports Cohen’s (1991; cited in Nakamura, 2000) view in this regard. In addition, Nakamura, referring to Moor and Surber (1992), suggests that L2 learners may have developed their own strategies to the point that they are unwilling to change them or find other strategies unhelpful.

The strategy of using semantic feature grids gained a very low frequency index of 10.5 points; 37 respondents said that they never use it. Similarly, using semantic maps gained a low frequency index of 13 points (the fifth least used consolidation strategy). 35 respondents said that they never use it or had never heard about it. The infrequent use of semantic maps to group L2 words (according to topic,

theme, function, etc.) by Saudi EFL learners echoes Schmitt's (1997) study which reports it to be the second least used consolidation strategy by Japanese EFL learners. Further, this result is generally consistent with Nakamura's (2000) finding that the two grouping strategies of placing new items in a group according to topic, theme or function or grouping new items according to grammatical category are the second and third least-used memorisation strategies by Japanese EFL learners (Nakamura, 2000). Similarly, grouping items is reported as one of the least frequent strategies in O'Malley *et al.*'s (1985) study. With a slightly higher frequency index of 19 points came the strategy of using semantic scales. 27 respondents said that they never use it.

Contrary to our expectations, the strategy of learning multi-word units received a relatively low frequency index of 41 points. More surprisingly, 12 respondents said that they never use it. However, a considerable number of respondents and interviewees stated that they had been introduced to it in a speaking course. They observed that they also use this strategy for writing exercises. In fact, with the exception of the four 'always' responses, the subjects' responses were distributed fairly evenly across the five answers (ten selected 'often', thirteen 'sometimes', eleven 'rarely' and twelve 'never').

Noting a new word (or a number of new words) in the context of a sentence or a phrase refers to memorising the context where a new word occurs or writing down a whole sentence or phrase including the new word. This strategy seems to be more frequently used than organisation strategies (e.g. using semantic maps, semantic grids, gradable scales). It received 51 points. This is in agreement with Nakamura's (2000) finding in this regard. He reports that placing a new item in a meaningful context is used more frequently by Japanese learners of English than reorganising new words according to topic, theme, function, or grammatical category. Nakamura's

finding, he maintains, confirms Gu and Johnson's (1996) finding that Chinese university students report placing L2 items in a context more frequently than using the other two grouping strategies. The three respondents who said that they never use it may have been thinking only of actually writing down a new word within a sentence. In fact, other subjects' comments and interview data revealed that they were referring to reading an example phrase or sentence in the dictionary.

The form-related strategies received higher frequency indexes. This is consistent with Schmitt's (1997) finding that Japanese EFL learners more frequently use those consolidation strategies that focus on the pronunciation and spelling of new words. Studying the spelling of new words obtained 65.5 points. It was clear from the respondents' comments that this strategy is important both for word recall and for learning an important aspect of word knowledge in an academic learning environment. This strategy is, in fact, important for both classroom activities and mid-term and final exams. Studying the pronunciation of new words obtained 76 points. 24 of the 50 respondents reported that they always use it, whereas twelve said that they often use it. Some respondents acknowledged that making pronunciation mistakes is embarrassing in front of classmates and course leaders, so they pay significant attention to pronunciation.

Connecting a new word to a personal experience gained a relatively good frequency index of 57.5 points. Remembering the place where a new word is encountered, linking it to an important occasion or finding it problematic in an important classroom discussion or in a mid-term or final exam were given as examples of connecting a new word to a personal experience. The fairly frequent use of connecting a new word to a personal experience can be explained by the fact that

the EFL learners are not in regular and varied contact with the target language and its native speakers (Nakamura, 2000).

The two strategies that require connecting a new word to other semantically related words obtained different results. Connecting a new word to its synonyms or antonyms scored a higher frequency index (56 points) than connecting a new word to its coordinates (35.5 points). This may be due to the fact that synonyms and antonyms of a new word are usually available in dictionaries, whereas connecting a word to its coordinates requires efforts of initiative.

With regard to cognitive strategies, the more frequently used cognitive strategies can be judged as being more course-related. On the other hand, the strategies which require more dedication and initiative received lower frequency indexes.

Five repetition strategies were investigated. These included verbal repetition, written repetition, repeated listening to audio-taped material, repeated listening to audio-taped word lists and repeated listening to other material. The strategies of verbal and written repetition seem to be quite common. Verbal repetition received a relatively high frequency index of 64.5 points. This result is in line with the respondents' frequent use of studying the pronunciation of new words (76 points). Written repetition, however, gained a lower frequency index of 55 points. This drop is also in line with the less frequent use of studying the spelling of new words (65.5 points), compared to studying pronunciation. The frequent use of verbal and written repetition by Saudi EFL learners confirms previous research findings that repetition is a common strategy among L2 learners (O'Malley et al., 1985; Chamot, 1987; Lawson and Hogben, 1996). In particular, it repeats Nakamura's (2000) and Schmitt's (1997) findings about Japanese learners of English. Schmitt (1997) reports that verbal and

written repetitions are the most used strategies by Japanese EFL learners. Nakamura reports too that the most frequently used repetition strategy by Japanese EFL learners is saying or writing the item repeatedly when they revise it for mid-term or end-of-term exams. The popularity of verbal and written repetition strategies may be attributed to the study style (Schmitt, 1997). In the case of our respondents, their frequent use of verbal and written repetition is a reflection of their learning environment in which spelling and pronunciation are important assessment criteria in oral and written exams.

The separate strategies of repeated listening to recorded material received differing frequency indexes. As the more frequently used listening strategy, repeated listening to a tape-recorded story had 44 points. It was clear from the subjects' comments that tape-recorded stories are available in the department library and in local bookstores and can be recorded from some radio stations. The other two strategies scored very low frequency indexes. Repeated listening to a word list received 7.5 points only; 41 respondents said that they never use it. Listening to the item repeatedly is reported as the least used repetition strategy by Japanese learners of English (Nakamura, 2000). Repeated listening to other recorded material (e.g. recorded TV and radio programmes) had a low score of 9 points. 28 respondents said that they never use it. This is, in fact, a surprising result given the availability of English media sources. Some respondents who reported that they use it quite frequently stated that they were introduced to it and trained in using it by a listening course teacher and found it very useful. However, some said that they prefer to maximise listening to English media without recording. Some subjects also said that they used to record some TV and radio programmes at the beginning stages.

The strategy of taking vocabulary notes received a high frequency index of 73 points. In fact, it is the second most used consolidation strategy after the strategy of studying the pronunciation of new words (76 points). Previous research reports that note-taking is one of the most frequently used cognitive strategies by L2 learners (O'Malley *et al.*, 1985; McCarthy, 1990; Schmitt, 1997; Nakamura, 2000). The subjects' responses to a follow-up question show that thirty-one subjects tend to underline new words and translate them into Arabic on the margins of their textbooks, and rarely keep vocabulary records for new words. They say that they are too busy with course requirements to pay special attention to the organisation of vocabulary items. Only 9 respondents said that they keep vocabulary records for some modules and maintained that they keep them in word lists and add new words on a chronological basis (i.e. in the order in which they arise). This is along the lines of the subjects' infrequent use of making semantic maps, grids, word lists, word cards, etc. Leeke and Shaw (2000:283) observe that *'[t]his kind of cost-benefit analysis [translating a word list into L1] is at the heart of the learner's decision as to whether and how to make vocabulary notes ... The cost of ordering the [word] list in semantic or other terms is evidently too high for most learners. The only ordering we found was alphabetic, an approach which helps retrieval from the list but does not structure the input to improve retention.'*

A possible explanation for the frequent use of writing down notes on the margins of textbooks and not rearranging them later on is that our subjects may find it more practical to have the translations of new words available where they appear on textbooks for later revision for mid-term and final exams instead of referring to a bilingual dictionary again. The Saudi EFL learners' tendency to keep vocabulary notes in the margins of textbooks echoes Nakamura's (2000) finding that Japanese

learners of English tend to keep vocabulary notes on the margins of textbooks most frequently and that they are less likely to follow a certain principle to arrange or organise new words (e.g. according to alphabetical order, topic, theme, function, grammatical category) afterwards. This also confirms the findings of previous studies (e.g. O'Malley *et al.*, 1985; Cohen, 1990).

The strategy of designing a word list scored 36 points. This result is a natural consequence of infrequently reorganising vocabulary notes. 20 respondents said that they never design a word list. The respondents' comments show that some of them keep word lists for some modules. Similarly, designing word cards received a very low frequency index of 11 points. 39 respondents acknowledged that they never design word cards. Some respondents said that they do not use this strategy because they encounter many words on a daily basis. Some also said that word cards are more suitable for beginners. These low scores for designing word lists or word cards are good evidence for the fact that the strategies that require dedication and hard work are less frequently used.

The strategy of using revision materials received 64 points, showing it to be the fifth most frequent consolidation strategy. It seems, however, from the respondents' comments and interview data, that their use of revision materials is limited to the course modules. In other words, they are more likely to revise new words that they encounter within the course textbooks and handouts in their preparation for mid-term and final exams. This may be why it is the only consolidation strategy which none of the respondents said that they never use.

4.3.2 Subjects' evaluation of consolidation strategies

The overall mean of the respondents' evaluation is 63.57 points. However, the memory strategies emerge as less appealing to the respondents than the cognitive strategies. The average mean evaluation of the twelve memory strategies is 58.83 points, whereas the average mean of cognitive strategies is 65.56 points. The subjects' evaluations of the individual consolidation strategies are shown in table 4.8 below.

Table 4.8 Subjects' evaluation of consolidation strategies

Consolidation Strategies	Evaluation Responses					Mean	Mode
	VU*	U	QU	NU	IDK		
using pictures/imagery (mem)	6	13	10	0	21	41.50	IDK
using the keyword method (mem)	10	8	6	6	20	41.00	IDK
using semantic feature grids (mem)	8	15	2	2	23	41.50	IDK
using semantic maps (mem)	4	13	7	1	25	35.00	IDK
using scales for gradable words (mem)	7	20	7	0	16	51.00	U
learning multi-word units (mem)	12	16	8	4	10	58.00	U
noting a new word into a sentence or a phrase (mem)	18	24	5	0	3	77.00	U
studying the spelling of new words (mem)	18	28	3	0	1	81.00	U
studying the pronunciation of new words (mem)	28	20	1	1	0	87.50	VU
connecting a word to a personal experience (mem)	17	15	11	1	6	68.00	VU
connecting a new word to its synonyms or antonyms (mem)	14	28	4	0	4	74.00	U
associating the new word with its coordinates (mem)	7	19	8	0	16	50.50	U
verbal repetition (cog)	21	23	0	2	4	77.50	U
written repetition (cog)	27	14	4	1	0	79.50	VU
repeated listening to a tape-recorded story (cog)	25	21	1	0	3	82.50	VU
repeated listening to a tape-recorded word list (cog)	1	10	10	5	24	29.50	IDK
repeated listening to other materials (cog)	24	26	0	0	0	87.00	U
taking vocabulary notes (cog)	23	23	4	0	0	84.50	VU
designing a word list (cog)	18	17	5	2	8	67.50	VU
designing flash cards (cog)	7	10	5	3	25	35.50	IDK
using revision materials (cog)	26	19	5	0	0	85.50	VU

VU very useful, U useful, QU quite useful, NU not useful for current level, IDK I don't know

The strategy of using pictures/imagery achieved 41.5 points. Some respondents criticised this strategy for not being practical. Some also said that it is difficult to make or collect pictures for the large number of new words that they endlessly encounter.

Similarly, using the keyword method obtained a relatively low rating of 41 points, mainly because 20 respondents did not evaluate it (i.e. chose 'I don't know'). In fact, their comments correspond to the criticism against this method by some researchers. They said that it is not possible to use the keyword method with all new words, that it takes time and that it is difficult to create an image combining two words from L1 and L2. Some also criticised the keyword method for being unsuitable for adult learners. The keyword method emerged as the second least useful memory strategy and the fourth-least useful consolidation strategy. This agrees with Schmitt's (1997) finding that Japanese EFL learners rank the keyword method as one of the least helpful strategies.

The organisation strategies, too, emerged as not very appealing to Saudi EFL learners. Using semantic feature grids gained a low rating of 41.5 points. 25 respondents did not evaluate it. Some respondents criticised it for being difficult to do and for leading to confusion rather than learning. The strategy of using semantic maps was rated even lower, at 35 points only, with 25 respondents selecting 'I don't know'. Some respondents remarked that making a semantic map takes time. Some also said it is not possible to make semantic maps for the large number of new words that they constantly encounter. Using semantic scales received a better rating with 51 points, though 16 respondents opted for 'I don't know'.

The strategy of learning multi-word units received a relatively low rating with 58 points. Though 12 respondents described it as 'very useful' and 16 as 'useful', it is

difficult to explain why 10 respondents opted for 'I don't know'. Some respondents justified their decision by stating that they had not been introduced to it before. Those who evaluated it positively said that it is very useful for creating self-confidence and expressing frequent ideas.

Noting a new word (or a number of new words) in the context of a sentence or a phrase received a positive evaluation of 77 points. This evaluation may suggest the respondents' positive evaluation of context-based strategies.

The form-related strategies also received a positive evaluation. Studying the spelling of new words received 81 points. Similarly, the strategy of studying the pronunciation of new words received 87.5 points; it emerged as the most frequently used consolidation strategy as well as the most positively evaluated one.

Connecting a new word to a personal experience received 68 points. Some respondents appreciated this strategy because, as they said, it is a very effective technique for remembering L2 words. Its main problem, some said, is that connecting a new word to a personal experience should come naturally and may be useless if contrived.

Connecting a new word to its synonyms or antonyms received a positive evaluation of 74 points. This positive evaluation may be related to the respondents' frequent use of the dictionary and thus provide some information on word synonyms and antonyms. Connecting a new word to its coordinates had a lower rating index of 50.5 points. 16 respondents did not evaluate it. This is in line with its infrequent use (19 respondents stated that they never use it).

With regard to cognitive strategies, as we said earlier, these received better ratings on average than memory strategies. Seven cognitive strategies achieved rating indexes of over 67 points. This finding supports to a certain extent that of Gu and

Johnson (1996) who report that Chinese EFL learners responded negatively to memorisation strategies.

With the exception of repeated listening to audio-taped word lists, the repetition strategies were positively evaluated. Oral repetition received 77.5 points and written repetition received 79.5 points. The high rating of these two form-related strategies agrees with the high rating of the other form-related strategies of studying the pronunciation and spelling of new words. Repeated listening to stories and other materials (other than audio-taped word lists) emerged as very appealing to the respondents, receiving 82.5 and 87 points respectively. The respondents praised them for presenting words in context, being more interesting and allowing repeated listening. The strategy of repeated listening to a tape-recorded word list received 29.5 points only. This was because 24 respondents did not evaluate this strategy. The low rating of listening to audio-taped word lists may reflect the respondents' high rating of repeated listening to stories and other materials. Some respondents, however, said that they have tried listening to audio-taped word lists but found that the lists that they used included infrequent words.

Taking vocabulary notes was highly evaluated by the respondents, receiving 84.5 points. 23 respondents described it as 'very useful', 23 as 'useful' and 4 as 'quite useful'. None of the respondents described it as 'not useful' or said 'I don't know'. Designing a word list received a somewhat lower rating of 67.5 points, whereas the strategy of designing flash cards appeared to be even less appealing. It received 35.5 points only, with 25 respondents opting for 'I don't know'. In fact the strategies of repeated listening to a word list and designing flash cards, the two lowest rated strategies, received more 'I don't know' responses than any other cognitive strategy.

The respondents' perception of the strategy of using revision materials also achieved a high evaluation index with 85.5 points. The respondents may have overvalued this strategy because revising new words that they encounter in textbooks, handouts, and lectures is an important part of their preparation for mid-term and final exams.

4.3.3 Summary of findings on consolidation strategies

1. The five most frequently used consolidation strategies are (in descending order): (1) studying the pronunciation of new words (76 points), (2) taking vocabulary notes (73 points), (3) studying the spelling of new words (65.5 points), (4) oral repetition (64.5 points), and (5) using revision materials (64 points). Repetition and note-taking are found to be frequently used by L2 learners (O'Malley *et al.*, 1985).
2. The five least frequently used strategies are (in descending order): (1) using semantic maps (13 points), (2) designing one's own flash cards (11 points), (3) using or making semantic feature grids (10.5 points), (4) repeated listening to other tape-recorded material (9 points) and (5) repeated listening to a tape-recorded word list (7.5 points).
3. The memory strategies that require some kind of deep processing received low frequency indexes. These included using the keyword method (24 points), using scales for gradable words (19.5 points), using semantic maps (13 points), and using semantic feature grids (10.5 points). Connecting a word to a personal experience, connecting a new word to its synonyms or antonyms, noting a new word (or new words) in the context of a sentence or a phrase and learning multi-word units are slightly more frequently used deep processing strategies, possibly because they are well known to the subjects. Previous studies (O'Malley *et al.*,

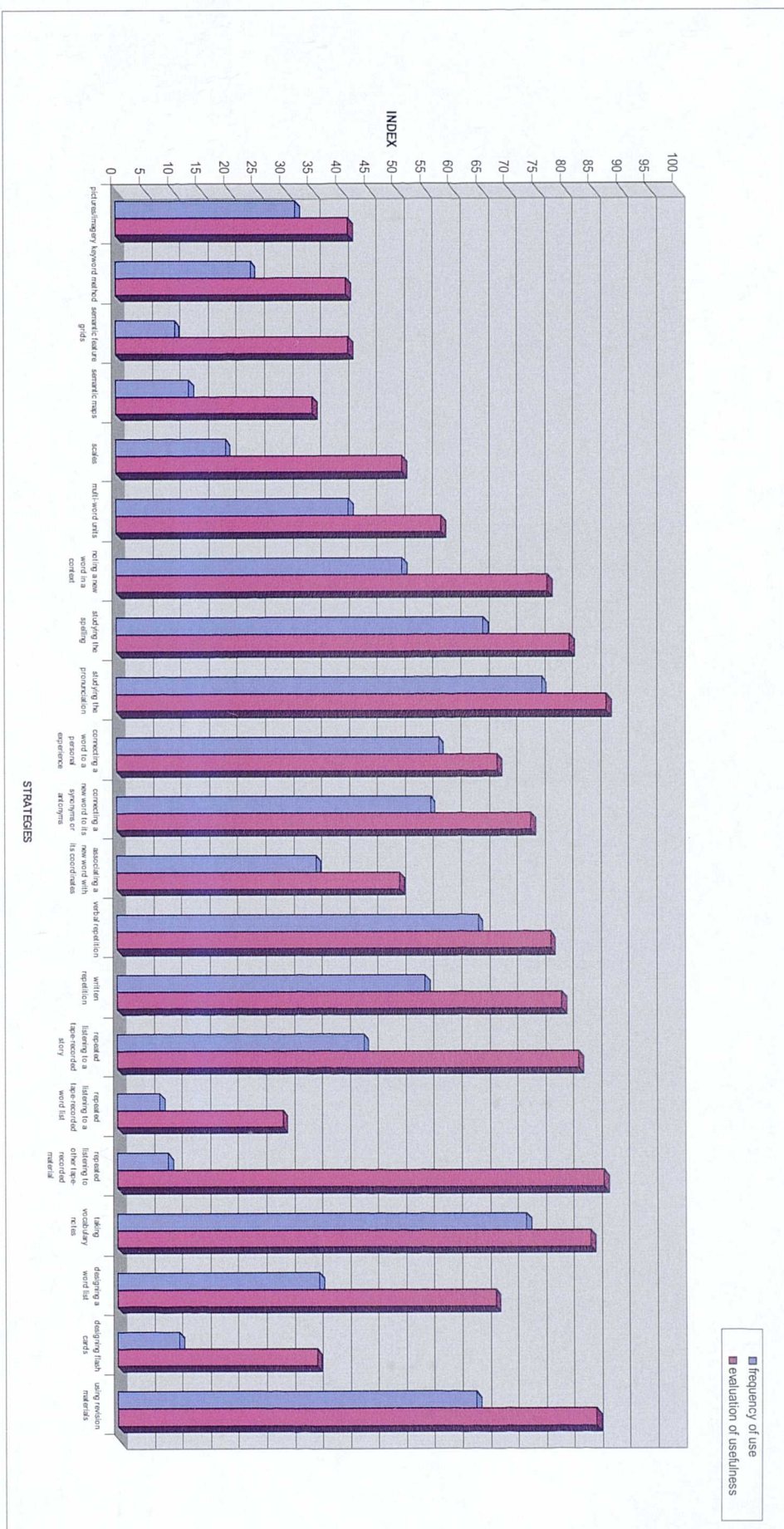
1985; O'Malley and Chamot, 1990; Schmitt, 1997; Gu and Johnson, 1996) reveal that memorisation strategies that require deeper processing or mental manipulation (e.g. elaboration, grouping, keyword method, semantic mapping) are not commonly used by L2 learners. This, Schmitt (1997) maintains, can also be attributed to the fact that L2 learners do not know these strategies, that they know them but are not trained in using them effectively, or that they prefer other strategies which they also find effective. The least frequent consolidation strategies received low indexes because they were unknown to a considerable number of respondents. This is particularly apparent with the five least frequent consolidation strategies as well as the strategies of using the keyword method, using scales for gradable words, designing one's own word list and associating a new word to its coordinates.

4. All the consolidation strategies received evaluation indexes higher than those of their reported use (see figure 4.3 below). However, three strategies received evaluation indexes significantly higher than those of their reported use. These were (1) repeated listening to recorded materials other than word lists or stories (9 points for use and 87 for evaluation), (2) listening to audio-taped stories (44 and 82.5 respectively) and (3) designing a word list (36 and 67.5 respectively).
5. Twelve consolidation strategies received evaluation indexes higher than 67 points. But six strategies in particular received over 80 points. These were (in descending order) the strategies of (1) studying the pronunciation of new words (87.5 points), (2) repeated listening to recorded materials other than word lists or short stories (87 points), (3) using revision materials (85.5 points), (4) taking vocabulary notes (84.5 points), (5) repeated listening to audio-taped stories (82.5 points), and (6) studying the spelling of new words (81 points). Saudi EFL learners seem to

overvalue the form-based strategies such as studying the pronunciation and spelling of new words and written and verbal repetition. This finding echoes that of Schmitt's (1997) study of Japanese EFL learners. The Saudi EFL learners also seem to overvalue the course-based strategies such as using revision materials and taking vocabulary notes. Taking vocabulary notes is also reported in Schmitt's study as one of the strategies evaluated as very helpful by Japanese EFL learners.

6. Consolidation strategies come in second position after metacognitive strategies in terms of category index and of difference between category frequency and evaluation means (cf. table 4.3, p. 166).

Figure 4.3 Use and evaluation of consolidation strategies by Saudi EFL learners majoring in English



4.4 Conclusion

The analysis of the questionnaire data provided a clear picture of the respondents' overall tendencies in using and evaluating the three categories of VLSs. The overall category mean for reported use of each of the three categories is quite low (40.25 for metacognitive strategies, 42.11 for discovery strategies and 40.28 for consolidation strategies). This puts the categories within a frequency range between 'rarely' and 'sometimes'. With regard to the individual strategies, the course-related strategies (e.g. taking vocabulary notes in class, using revision material, studying the spelling and pronunciation of new words, using an English-Arabic dictionary) are used more frequently. Other strategies are less frequently used for a number of reasons.

Course demand seems to be a very effective factor controlling strategy use. The immense pressure on students caused by constantly encountering new words may leave them at a loss with regard to controlling their VLSs. This may explain why the Saudi EFL learners are more interested in the context-based strategies as well as the cognitively less demanding ones. The subjects' comments and interview data confirm Nation's (2001) observation that immediate pressures (module demands in our case) always override the wish to take control of vocabulary learning. Course demands naturally accounted for the rare use of strategies which require dedication and more effort, especially with regard to consolidation strategies.

The overall findings of the current study are generally in agreement with Sanaoui's (1995) report on unstructured L2 vocabulary learning. She found that adult L2 learners who follow an unstructured approach to vocabulary learning are characterised by reliance on course, minimum independent study, restricted range of self-initiated activities, minimum record of lexical items (tending to be ad hoc), and

little or no review of lexical items. The strategies that require more time, more planning, and more learning effort (elaboration, active mental processing, reorganisation) are less frequently used than other strategies (O'Malley *et al.*, 1985; Chamot *et al.*, 1987; Gu and Johnson, 1996). The current study reveals similar findings with regard to its participants' VLSs. However, it is arguable whether an English-major student's dependence on course requirements is an indication of poor strategy use. Constant exposure to English through lectures and reading and translation activities inside the university, and media and reading activities outside it, is seen by the subjects as an ideal way of learning new words and consolidating learnt ones. In particular, course modules will also guide subjects in terms of word frequency and necessary word information. Leeke and Shaw (2000: 285) rightly say that '*[t]he environment and stage of learning constitute further factors in determining optimal practices. Learners in an L2 environment are subject to frequent natural repetition of many types of words and perhaps need conscious acquisition strategies less urgently or only for some kinds of word.*' This may be true of our subjects who, though EFL learners, are majoring in English. Their heavy reliance on the course may be because they feel that any use of L2 should be directed towards a more important objective, namely achieving course credits.

In addition, the subjects' main shortcoming in terms of strategy use is that they are not aware of several strategies. In particular, this was the case with the strategies of using graded or controlled reading, using monolingual dictionaries with defining vocabulary, using the keyword method, using semantic grids, semantic maps and scales for gradable words.

Learning style is also an important factor affecting strategy use. Saudi EFL learners seem to rely on course demands and on teachers. In addition to blaming

course requirements for infrequent use of some of the strategies, the respondents also believe that it is the responsibility of their teachers and module planners to introduce them to and train them in using VLSs.

Scarcity not only of opportunity, but also of the necessary materials may lead to infrequent use of some strategies (O'Malley *et al.*, 1985). The strategies which involved graded readers, English media sources (TV, radio, newspapers, internet), computers, group work, teachers' assistance, classmates' assistance, or tape-recorded material received low frequency indexes.

With regard to strategy evaluation, the respondents' evaluation of the three types of strategy is clearly higher than their reported use. This finding has implications in terms of promoting autonomous vocabulary learning in accordance with student perceptions. More specifically, the respondents evaluated some strategies that they do not frequently use or do not know very positively (e.g. published graded readers, monolingual dictionaries). This suggests that learners may recognise the usefulness of a strategy that they do not usually use and that they are willing to try new strategies if they are introduced to and trained in them (Schmitt, 1997). There are also a few strategies whose evaluation indexes were lower than those of their reported use. This also suggests that L2 learners might have resistance to using a certain strategy even if they positively rate it and continue to use a less evaluated strategy because of certain use conditions (e.g. time, task demand). In general, the metacognitive strategies are the most highly evaluated type of strategy. This may reflect a high level of metalinguistic awareness (O'Malley *et al.*, 1985). It is necessary to give consideration to the highly rated strategies and in particular to those strategies where the evaluation index is significantly higher than the frequency of use index.

CHAPTER FIVE

OVERALL ANALYSIS OF SUBJECTS' THINK ALOUD PROTOCOLS

This chapter classifies and discusses the performance of 42 subjects. It consists of three sections. Section one describes the main criteria used to classify the subjects' TAPs into five groups. Section two introduces nine representative samples, one from the first group and two from each other group. A summary of the overall findings relevant to the subjects' TAPs is presented in section three.

5.1 Main Criteria for Group Classification

The 42 subjects' TAPs have been classified into five categories. These are: (1) very successful, (2) successful, (3) barely successful, (4) unsuccessful, and (5) very unsuccessful. Distribution of subjects among the categories was respectively 1 (= 2.38% of the subjects), 6 (= 14.28%), 14 (= 33.33%), 8 (= 19.04%), and 13 (= 30.95%).

The classification of each subject's performance is based on a number of criteria. The main criteria used are: (1) demonstration of proficiency level, (2) contextual understanding, (3) use of the dictionary, (4) time-management, and (5) planning (see Table 5.1 below). Three further criteria used in the assessment of the subjects' TAPs were how successful they were in the use of the strategies of guessing unknown words, skipping new words and the manipulation of global knowledge.

Table 5.1. Main criteria for Group Classification

	Proficiency	Contextual understanding	Use of Dictionary	Time-management	planning
Very successful	high	high	effective	high	effective
Successful	average	high	effective	good	effective
Barely successful	average	partial	quite effective with some problems	quite slow	inconsistent
Unsuccessful	below average	very partial	quite effective with some problems	very slow	no planning
Very unsuccessful	low	careless and leaves gaps	has serious problems	slowest	no planning

5.1.1 Proficiency Level

The criterion of proficiency level involves the subjects' vocabulary knowledge in terms of recognising the underlined (problematic) words as well as the frequent and the less frequent words that are not underlined in the assigned texts. This criterion also considers the extent to which some grammatical structures may have caused erroneous understanding. The less frequent such misunderstandings, the more proficient the subject was judged to be. The analysis also considered how these two factors, vocabulary and grammatical knowledge, affected the overall understanding of the texts. Only one subject was found to function at a high proficiency level. He demonstrated a satisfactory command of the difficult lexical items and of grammatical structures anticipated by the experimenter to be problematic, and encountered as difficult or confusing by the majority of the subjects. He knew almost all the problematic words. The successful and barely successful subjects, on the other hand, showed an average proficiency level. They knew some problematic words, and had no difficulty with a majority of the confusing or difficult grammatical structures. The unsuccessful subjects showed a below average proficiency level. They failed to solve most of the lexical items (words, phrases and sentences) and difficult grammatical structures anticipated as problematic. They also did not know some common words.

The very unsuccessful users gained the lowest proficiency ratings among the subjects. They failed to solve any of the problematic lexical items as well as many other words and allowed the difficult grammatical structures to affect their overall performance, especially with regard to contextual understanding and use of the dictionary.

5.1.2 Contextual Understanding

The second criterion involved the extent to which the subject's vocabulary and grammatical knowledge affected his contextual understanding, assessing his consideration of immediate and wider context when dealing with new words and whether he took account of the sequence of ideas. The researcher found the very successful subjects as well as the successful ones to have shown a high level of contextual understanding. Their TAPs do not reveal any shortcomings. They take into account the sequence of ideas and consider the context when referring to the dictionary or trying to guess the meaning of a new word. The barely successful subjects show partial understanding. There were some gaps in their overall understanding, which affected their ability to guess some unknown words or determine the most suitable dictionary meaning of some polysemous words. Likewise, unsuccessful subjects are judged to have revealed very partial contextual understanding. They differed from the barely successful subjects in that they gave less consideration to the sequence of ideas. This, in turn, affected their guesses and the effectiveness of their dictionary searches. Finally, the very unsuccessful subjects have been considered by the experimenter to be inattentive to context and to have left several gaps in their TAPs.

5.1.3 Using the Dictionary

The subjects' use of the dictionary was evaluated according to a) the type of dictionary being used and b) criticality towards the dictionary suggestions, that is reading all the meanings, reading the example sentences and considering pronunciation. The subjects' use of the dictionary varied very significantly. The very successful and successful subjects used the dictionary very effectively. They first tried to guess new words and used the dictionary only if they were not sure about their guess. When they referred to the dictionary in order to check a polysemous word they were able to determine the most suitable meaning of the new word according to the context. They also checked other relevant information, such as spelling, pronunciation, accompanying examples, and collocations. Their high proficiency level helped them in making use of such information. The use of the dictionary by the barely successful and unsuccessful subjects could be rated as being quite effective with some problems. This could be attributed to their partial contextual understanding. They sometimes chose incorrect dictionary meanings for polysemous words. In addition, they were inattentive to the pronunciation of some new words, not keen to read the example sentences, and not enthusiastic to learn more information about new words. Their lack of contextual understanding caused them to make poor use of the dictionary, and this in turn further weakened their contextual understanding. Finally, the very unsuccessful subjects were observed by the experimenter to have serious problems in terms of finding dictionary entries, using phonetic symbols found in the dictionary, and accepting dictionary meanings without checking them against the context. In fact, they proved themselves to be in notable need of training in all

dictionary skills. Their use of the dictionary shows that on encountering a new word, they immediately look it up without considering the wider or even immediate context, especially the words immediately following. For example, when they tried to solve the key phrase '*hammer out*', they did not refer to the word '*debate*' in the title or take into account the following word '*consensus*'. In fact, they failed to understand '*hammer out*' successfully because they basically did not know these other two words. Their failure to use the dictionary appropriately resulted in several comprehension problems, especially when they erroneously tackled a key word, such as '*hammer out*'. On the other hand, when the subjects in the first three categories first misunderstood a new word, they amended their understanding once they had grasped more ideas about the overall message. The unsuccessful and very unsuccessful subjects, by contrast, did not assess or revise their comprehension. This might make it quite impractical for them to improve their vocabulary through either controlled reading (on one topic or related topics) or free reading.

5.1.4 Time-management

The fourth criterion, time-management, is seen as a positive indicator of how successful a subject might be as a user of WSSs for reading comprehension. Three factors were considered when analysing each subject's time-management. These are (1) reading coverage; that is the number of texts, paragraphs and lines covered, (2) reading speed; that is the time spent on each text, and (3) the reasons for the slow or quick rate of reading. The higher the reading speed of a subject, the more likely that reading will contribute to the extension of his vocabulary. Slow reading distracts learners' attention from the sequence of ideas and makes reading less enjoyable. This, of course, has been assessed by the experimenter against the previous criteria; reading speed by itself is not a reliable indicator of high potentiality for vocabulary learning.

The reading speed of the single very successful subject was rated by the experimenter as high, with short pauses which did not affect his reading rhythm. He finished the five assigned texts in less than 45 minutes, an average of nine minutes per text. He might normally have needed less time (2 or 3 minutes less), because in the current experiment he was required to articulate the protocols through which he dealt with new words and demonstrate his comprehension of the texts. Unlike the other four groups, the very successful informant was characterised by skipping what he successfully reckoned as unimportant new words in terms of reading comprehension. This allowed him to finish the task in a reasonably good time. In comparison, the successful subjects were slower. This was due to the fact that they stopped more frequently to check the dictionary for unknown words. The very successful informant, who demonstrated a larger vocabulary store, checked the dictionary less frequently than the successful subjects. However, the latter demonstrated a reading speed of about two lines per minute. Likewise, time-management on the part of the barely successful potential learners was almost the same as that of the successful ones, with one significant difference in that the barely successful ones spent more time in looking up unknown words, mainly because of their partial understanding of the texts. They were unable to finish the five texts in the time allocated. The reading speed of the unsuccessful subjects was very slow. This can be attributed to their very partial understanding of the texts, their encountering of many unknown words, and to the time they spent on checking many new words in the dictionary. Most of them finished three texts only. The very unsuccessful subjects were the slowest readers among the five groups. Most of them finished only two texts, while a few finished three. Their actual reading speed, regardless of the requirements of the current task, was extremely slow. In addition, they spent quite a long time trying to check many new words in the

dictionary and assess their understanding of the new vocabulary items against their general poor contextual understanding.

5.1.5 Planning

Finally, the criterion of planning also distinguished the five groups from each other. Planning, here, refers to a number of actions taken 1) before, 2) during and 3) after the task of dealing with new words. Planning before the main task (dealing with new words) involved pre-reading the text at least once. Planning during the performance of the task includes reading complete sentences first or a complete paragraph before commencing the required task, deciding how and when to refer to a dictionary, how to deal with new words (guess, skip, or check in a dictionary), and deferring dealing with new words to a later stage. Possible post-task activities were revising one's reading comprehension after finishing a text and reconsidering understanding of the checked words. The very successful subject applied all three types of planning. The successful subjects varied in their planning within a text and across the texts, but they proved to be aware of the three types of planning and how to apply them effectively. The barely successful subjects did not apply any of the planning actions before or after the task. Their planning was limited to actions taken during the performance of the task, mainly reading a whole sentence before deciding what to do with a new word. The other two groups, the unsuccessful and the very unsuccessful subjects did not show any type of planning. They did not read the whole text first, did not read a whole paragraph and did not deal with new words in the context of the sentences of which they were part. Their focus was on new words per se. They also did not revise their incorrect understanding of some new words after finishing a text, even if they realised that they had been proceeding with an incorrect understanding.

5.2 Representative Samples

In this section, the TAPs of nine representative samples will be discussed in more detail. The original plan was to use ten representative samples with two subjects from each group being selected. Because it turned out that the very successful category contained only one subject, the number was reduced to nine representative samples: one very successful subject and two subjects from each of the other four groups. Each representative sample includes a detailed discussion of the sample's overall assessment, error analysis and patterns of behaviour. The overall assessment is provided in an introductory section to give a broad description of the sample member's proficiency level, contextual understanding, use of the dictionary, time-management and planning. The introductory section concludes with a number of recommendations for the sample member concerning the most effective strategies to improve his vocabulary knowledge and performance of the task. This is followed by the error analysis section, in which each sample member's errors in each text respectively are discussed in detail. Section three discusses eight aspects of each sample member's performance. These are (1) proficiency level, (2) contextual understanding, (3) use of the dictionary, (4) guessing unknown words, (5) skipping unknown words, (6) utilisation of global knowledge, (7) time-management, and (8) planning. The analysis of subjects' TAPs should be read alongside the assigned texts in appendix eleven. The names of the subjects referred to in the representative samples are pseudonyms.

5.2.1 Thamer (a very successful subject)

5.2.1.1 Overall Assessment

Thamer demonstrated an exceptionally high level of vocabulary competence and accordingly was, in comparison to other subjects, rated by the experimenter as a very successful subject. His TAPs revealed that he had a large vocabulary store and high grammatical competence. He knew almost all the anticipated problematic items and had no difficulty with syntactic structures. Besides, his high vocabulary competence was clearly exemplified by his understanding of the infrequent meanings of some polysemous words. Thamer displayed a top-quality performance with regard to the use of word-solving strategies. His use of global and local clues resulted in a high level of contextual understanding. He paid considerable attention to the sequence of ideas, because he was very keen to make his line of thought completely logical. In addition, his use of the dictionary was very efficient in terms of information deduction, criticality towards dictionary information, complementary use of monolingual and bilingual dictionaries, and time management. As regards his reading speed and coverage, Thamer was distinguished in finishing 110 lines from the five texts in about 55 minutes (2 lines per minute), given the fact that he spent a considerable time in verbalising his TAPs. He also planned his performance very effectively before, during and after the reading task.

Thamer can be fairly advised to continue to make use of the strategy of reading large quantities of authentic, comprehensible texts. This is in line with Nation's (2001) recommendation to this type of learner. With the exception of text E, Thamer enjoyed reading the texts. He even continued to read beyond the basic requirement of the task (i.e. at least two paragraphs per text). He expressed dissatisfaction with text E because it contained the largest volume of vocabulary

which was unknown to him. Moreover, text E was the last text, so it could be assumed that fatigue and boredom with the task might have played a significant role in decreasing his concentration and interest in the text. The efficient employment of WSSs alongside his advanced vocabulary competence also indicated that Thamer can benefit considerably from free reading activities in order to improve both the depth and breadth of his vocabulary knowledge. He demonstrated an exceptionally flexible approach towards the manipulation of both known and unknown words according to their contexts. This can be exemplified by the way he dealt with '*to hammer out a consensus*', '*offence*', '*week after weary week*', '*had given the matter little thought*', '*touched off a new round of passionate debate*', '*it cuts deep down*', and '*rather than resolving the question (problem)*' in text A, '*graded readers*' and '*supplementary readers*' in text B, and several examples in texts C and D. His flexible manipulation of the use of known words in a given context and his context-sensitivity when checking new words in the dictionary suggests that he is a highly proficient user of both reading and VLSs in a complementary approach. In other words, he does not manipulate one type of strategy (reading strategies or WSSs) at the expense of the other. This was clear through his effective planning of the reading tasks, high contextual understanding, competent use of the dictionary, good skipping, successful guessing, apparent manipulation of global knowledge, and well-structured time management.

5.2.1.2 Error Analysis

In terms of vocabulary learning through the use of WSSs, it was not very clear how Thamer would have learnt unknown words, simply because he encountered very few unknown ones. However, the fact that he showed a high level of contextual sensitivity shows that he managed to recognise the polysemous nature of many known

words through accurate manipulation of the context. Generally, his TAPs made it obvious that he suffered no deficiency in his use of WSSs. Therefore, he made a few errors that had no effect on his overall understanding of the five texts. In text A, for example, he unexpectedly could not work out the figurative use of the word ‘*invasive*’. First, he did not connect it to ‘*invasion*’, a word that he would be expected to know. Second, he did not consult the dictionary for this word and did not justify why he did not do so. He finally made a general guess (*invasive* = *bad behaviour*). He made another minor mistake in text A. Though he realised that the clause ‘*we don’t want to have our heads in the sand*’ was an idiomatic usage, he misunderstood it as ‘*we don’t want to be out of context*’. However, it should be borne in mind that his understanding was not totally irrelevant to the argument. His inaccurate understanding of this idiom can be attributed to his impression that he was allowed to deal with idioms fairly freely. Surprisingly, Thamer also misunderstood the phrase ‘*students involved in extracurricular activities*’ to mean ‘*students who had previous criminal activities*’. In this case, he failed to employ the strategy of word-segmentation when he encountered ‘*extracurricular activities*’. He could, for instance, have broken down ‘*extracurricular*’ into ‘[(extra) + (curriculum=curricular)] = out-of-class activities’. Another possibility is that he might have confused ‘*curricular*’ with ‘*criminal*’. His misunderstanding was, in fact, in line with the overall message of the text. This is a good example of how the context can sometimes be misleading and lends support to criticism of total learner dependence on implicit vocabulary learning. The negative effect of taking for granted a wrong or inaccurate guess is that a learner may not have another chance to modify his/her initial guess or that he/she may not be willing to modify it even after the same word is encountered again.

Thamer's TAPs while reading Text B suggested no misuse of WSSs. There was only one observable incident when he did not read the explanatory table of the vocabulary levels in the *Oxford Bookworms Series* and did not explain why he did not do so. It could be argued that he looked at the table but simply failed to mention this in his TAPs. Thamer's best performance in terms of proficiency level and use of WSSs was in text C. The only inaccuracy noticed in his TAPs in text C was the general guess of the word '*vicissitudes*', in '*to face all the vicissitudes firmly and squarely*', which he guesses as '*problems*'. Likewise, Thamer's performance in text D was clearly better than that of any other subject. In spite of this, Thamer made a slight error in text D. He mistakenly guessed '*lightness*' (*weightlessness*) to mean the opposite of '*darkness*'.

5.2.1.3 Patterns of Behaviour

The analysis of Thamer's TAPs revealed a number of observable patterns in his behaviour while performing the task. These are as follows:

a) Proficiency Level

Thamer was judged by the experimenter to be a highly proficient learner of English. His TAPs indicated a relatively large vocabulary store, at least in comparison to the other subjects. This is evidenced by his understanding of the meanings of all the anticipated problematic words, such as '*nod*', '*debate*', '*drug tests*', '*serene*', '*consensus*', '*offence*', '*deter*', '*merits*', '*saliva*', '*weary*', '*adjourned*', '*proposal*', and '*incentives*' in text A, for example. Similarly, his TAPs indicate that his grammatical knowledge is also advanced. His correct understanding of the first sentences in paragraphs one, two and three in text A, which proved grammatically problematic to most subjects, can be seen as a good example of his advanced grammatical knowledge. Additionally, he was one of a few subjects who made use of

the colon (:) (a typographical aid) in line three, paragraph one, text A. He remarked in his TAPs that the colon was used, as usual, before a list, in this case, of people who had gathered to discuss drug tests in schools. Another example in which he demonstrated a high level of grammatical competence was the first sentence in text B. Thamer also demonstrated an advanced level of correct pronunciation. He was never detected pronouncing any word incorrectly, even a new one. He was also keen to check the pronunciation of new words in the dictionary and say them aloud. Thamer's high proficiency level was also clear in his TAPs when, unlike some subjects, he realised that the strategy of word-segmentation could not be used with '*superintendent*' (i.e. super+intend+ent). On the other hand, he managed to successfully employ this strategy with such words as '*lakeside*', '*simplifications*', '*abridgment*', '*expansion*', '*complementary*', '*spirituality*', '*resistance*', '*strengthened*', and '*familiarity*'. Thamer's highly proficient level in terms of vocabulary store and advanced grammar knowledge allowed him to perfectly understand the texts that he read and to use the dictionary effectively. Consequently, he was able to read all the five texts in time and to use the strategies of guessing or skipping unknown words effectively.

b) Contextual Understanding

Thamer's high proficiency level in terms of vocabulary store and grammatical knowledge allowed him to demonstrate a remarkably high contextual understanding in comparison to other subjects. He left no comprehension gaps in his TAPs. In addition, no examples of contradictory comprehension or irrelevant selection of dictionary suggestions were identified in his TAPs. He was very attentive to contextual coherence. He paused quite frequently in order to reconsider the general

argument. He never moved on from a paragraph or a text before making sure that he fully understood the paragraph or the text in hand.

c) Use of the Dictionary

Thamer's relatively large vocabulary store, compared to other subjects, made him require the dictionary infrequently. He used both monolingual and bilingual dictionaries in a complementary way. In fact, the strategy of looking up a new word in the dictionary happened to be his third option after trying first to guess and then, if the new word was unimportant, to skip it. His focus was on understanding the main ideas of the text in hand. Thus, he used the dictionary in a very economical fashion. His search in the dictionary would typically take him less than one minute. He would usually go through the different meanings suggested by the dictionary and read the relevant example sentences and phrases in an attempt to carefully select the most appropriate dictionary meaning of a new word according to its context. His use of the dictionary was also characterised by the way he approached the information provided by the dictionary. He did not regard the dictionary as the final authority. In many instances, he suggested more accurate Arabic equivalents than the English-Arabic dictionary did. He was keen to figure out the Arabic equivalents or explanations that best suited the context.

d) Guessing Unknown Words

As mentioned above, Thamer's use of the strategy of guessing was his first choice for working out new words. Unlike most subjects who frequently decided to check their guesses in the dictionary, Thamer would usually trust his guess and take it for granted as long as it was in accordance with his understanding of the context. In general, there were few examples of his use of this strategy, mainly because he encountered only a few unknown words. Examples of his reliable guesses included '*hammer out*' in text

A, '*abridgment*' and '*fact-files*' in text B, '*chalks out*' in text C, '*comprising*', and '*oxidation*' in text D, and '*awe*' in text E. His ability to guess a number of new words correctly supports the theory that correctly guessing new words requires having a high percentage of text coverage, that is 98% or more (Nation, 2001). However, Thamer incorrectly guessed the meaning of the words '*invasive*' in '*some say it's invasive*' in text A, paragraph three. He assumed that '*invasive*' meant '*bad behaviour*', though this can still be considered a good general guess. In text A also, Thamer incorrectly guessed '*involved*', and '*extracurricular*' in '*... schools could conduct drug tests on students involved in extracurricular activities...*'. He first understood '*involved*' as '*having previous convictions*' and consequently guessed '*extracurricular activities*' as '*unpleasant actions*'. He seemed to have confused '*curricular*' with '*criminal*'.

e) Skipping New Words

Thamer seemed to be unwilling to skip any new word. On the few occasions when he skipped a new word, he first tried to guess it. However, if he was not confident about his guess he would decide to ignore it only if it looked as if it was not critical to his understanding of the main message; otherwise he would check it in the dictionary. Examples of this behaviour were detected when he dealt with '*pastor*' '*superintendent*' and '*assorted*' in text A, paragraph one. In general, he did not display any example of bad skipping.

f) Global Knowledge

The manipulation of his global knowledge allowed Thamer to achieve a high percentage of success in his understanding of the five texts and in his ability to correctly guess several new words. In text A, for example, he remarked at the beginning that the text was about drug problems in American schools, as he had already heard and read about this problem. He also understood '*5 to 4*' in '*the United*

States Supreme Court ruled, 5 to 4, that schools could conduct drug tests ... ' as five votes in favour and four votes against the ruling. He said that he frequently heard this phrase on the news. Similarly, he expressed his familiarity with the idea of graded readers in text B. In text C, as expected, he said that he was used to religious texts because he had taken a course on religious translation, not to mention his own religious knowledge as a student in an Islamic-oriented university. In text D, which was about aluminium, Thamer's global knowledge was apparent through his extra comments and his reasoning about his guesses. More noticeably, Thamer's TAPs when performing text E were quite good, as he seemed to be familiar with technical translation.

g) Time-management

Thamer managed to finish 35 lines from text A in 17 minutes, 20 lines from text B in 10 minutes, 15 lines from text C in 8 minutes, 28 lines from text D in 13 minutes and 12 lines from text E in about 7 minutes. This gives him an average reading speed of two lines per minute. His actual reading speed indicated a high proficiency level. His use of the dictionary was very economical. Thus, he managed not to lose sight of the general argument. In other words, his use of the dictionary did not seem to have distracted him from the main stream of contextual ideas. He was able, in a relatively short time, to locate the appropriate dictionary entries, go through the different meanings listed in the dictionary, read its example sentences and phrases and select the most appropriate dictionary meaning for a new word according to context.

h) Planning

Another indicator of his efficient use of WSSs was Thamer's planning. This included his processing of the task in hand, his approach to new words and his sequential use of WSSs. With regard to task processing, he first looked through each text as a

preparatory technique with the aim of achieving an overall understanding of the text and in order to recognise the problematic items and possible WSSs to deal with them. His approach to new words included, in addition to repeated reading of the sentence in which a new word appeared, a tendency to read the sentences before and after it. He also employed the strategy of solution deferment as part of his planning in the tackling of new words. An example of this was the way he dealt with '*dioxide*' in text D. When he realised the contextual value of this word, which he did not know, and was left with no local cues to guess its meaning, he opted to go through the rest of the paragraph; and he succeeded in working out the meaning four lines later.

5.2.2. Ahmad (a successful subject)

5.2.2.1 Overall Assessment

The experimenter evaluated Ahmad as a successful subject. In fact, this is an overall assessment of his performance throughout the four texts. Though his performance in text A showed a number of weaknesses, his TAPs in texts B, D and E proved that he was a very successful subject in terms of vocabulary store, use of WSSs and grammatical knowledge. He demonstrated a high proficiency level. He knew all the words used in text B and encountered only a few unknown words in texts A, D and E. Overall, he was able to recognise and solve most of the problematic vocabulary items. His high proficiency level was also evidenced by his accurate pronunciation with a tendency to imitate the American accent. In addition, he demonstrated good understanding of the grammatical structures in texts B, D and E. His high contextual understanding implied that he had no problem with any grammatical structure in texts B, D and E. In respect of reference materials, he used the monolingual dictionary quite effectively, with a few cases of deficient utilisation.

His time-management was not in accordance with the main task of the experiment, i.e. reading the five texts. Because he read more paragraphs in texts B, D and E than he was basically asked to, he did not read text C. In general, his reading speed was very quick in texts B, D and E and he spent a reasonably short time in checking new words in the dictionary. As regards his planning, he applied a number of strategic planning actions before, during and after reading texts B, D and E. In general, his performance in texts B, D and E would put him on the same level as the very successful learner in this experiment, namely Thamer. However, his performance in text A caused the experimenter to rank him lower.

Ahmad can be fairly recommended to develop his English vocabulary through controlled free reading. That is, he can benefit from extensive reading of comprehensible authentic texts (e.g. newspapers, short stories, novels, etc.) as well as from advanced graded readers. Some aspects of his WSSs may still be improved. For example, he needs to steadily implement his knowledge about the polysemous nature of many English words, because he seemed to recognise this characteristic in some cases and ignore it in others. In addition, he needs to develop the flexibility to modify the meaning of known words which were incorrectly learnt on previous occasions.

5.2.2.2 Error Analysis

Despite the fact that Ahmad excelled in many cases throughout the four texts that he was able to finish (A, B, D and E), he made a number of both minor and more serious mistakes. This allowed the experimenter not to rate him as a very successful subject. His few mistakes were mainly due to being context-insensitive, especially in text A. It should be taken into account, however, that Ahmad's context-insensitivity decreased drastically in texts D and E and that no single instance of contextual

misunderstanding was found in his TAPs in texts B. Most of his mistakes were in text A.

In text A, Ahmad first confused the word '*serene*' with '*sincere*' in '*a serene lakeside town*'. When he encountered '*serene*' he immediately stated that he already knew this word as ودود (*sincere*). Had he considered its context or checked it in the dictionary, he could have learnt a new word. This is in line with Laufer's synformy, category 9 (1997). Another mistake made by Ahmad was his mishandling of '*deter*' in '*... and whether they can best deter drug use though education or testing.*' He stated that he originally knew the word to mean مرعب (*horrifying*) as in, he said, '*deter* [horrible] *weapons of mass destruction*' أسلحة دمار شامل مرعبة. His original misunderstanding of this word as an adjective in this phrase was confirmed by having it preceded by the word '*best*' in text A. Likewise, his disregard of the context was remarkably inexplicable given that he tried to work out the underlined word '*merits*' in '*They have studied the merits of urine, hair and saliva tests.*' He first correctly explained the meaning of '*merits*' but, strangely enough, remarked that in this context it meant عينات بول (*samples of urine*). He linked it to '*urine*' and took his guess for granted without bothering to read the rest of the sentence. Moreover, when he decided to check '*merits*' in the dictionary and did not find any suggestion to support his wrong guess, he insisted on interpreting it as '*samples*'. Ahmad also made a number of less inharmonious errors in text A. He stated, for instance, that '*assorted*' in '*... and assorted parents, teachers, students and school board members*' modifies '*parents*' only. He also failed to work out the meaning of '*invasive*' though he remarked that he knew '*invade*'. He did not find it in the dictionary, so he decided to guess its meaning. Disregarding both the immediate and the wider context, he finally said that it meant شخص مخادع (*a deceptive person*), though it was used to describe a

situation. Ahmad was also found to have made two instances of bad skipping with '*passionate*' in paragraph four and '*range*' in paragraph five. The two words are seen by the experimenter to have a high degree of relevance to the main theme of the text.

Though the subjects in the current study were asked to verbalise their comprehension of the five texts and their protocols for dealing with unknown words, especially the underlined ones, it was very clear from Ahmad's TAPs in text A that he decided to deal with the underlined words only. That is, he was jumping from one underlined word to another. He might have misunderstood the task or simply decided to deal with underlined words only in an attempt to save time. In fact, this behaviour by Ahmad was puzzling and difficult to explain especially since he excelled in performing the task in texts B, D, and E. Taking into account Ahmad's excellent performance in texts B, D and E, it can be said that it was his misunderstanding of the task in text A that made him commit these unnecessary mistakes. Nevertheless, Ahmad's performance in text A is a good example of how serious the negative effects on learning new vocabulary are when the immediate and/or wider context are not taken into consideration by the learner.

When Ahmad performed the task as required, he made far less serious mistakes in texts B, D and E. There were three cases of inaccurate understanding observed in Ahmad's TAPs in text B. The first case was his explanation of the phrase '*one-way ticket*'. He stated that it meant ذهاب بدون عودة (*leaving and not returning*). The second case occurred with the phrase '*topic words*' in '*some topic words not in the vocabulary and proper nouns are also allowed.*' Here '*topic words*' refers to the words used in the titles of the short novels in the graded readers. Ahmad, however, remarked that the phrase meant كلمات مهمة (*important words*). In the third case, he confused the proper noun '*West*' with the word '*west*' in '*... and fits with West's*

(1955:69) *view*' and interpreted this phrase as آراء الناس في الغرب (*the views of people living in the west*). This can perhaps be attributed to the unfamiliarity of contexts where a writer refers to other writers.

In text D, Ahmad failed to clarify the meaning of the two words '*alloys*' and '*alloying*'. He simply took for granted his initial guess at '*aluminum alloys*' which was صفائح الألمنيوم (*aluminum plates*) and applied this meaning to '*alloying*' تصفيح (*plating*) five paragraphs later in '... *aluminum* ... can be strengthened by alloying it with up to ten per cent of elements such as copper, magnesium and silicon.' It seems that Ahmad learnt '*alloy*' (as a noun) through guessing from context in a previous text, and that he was unwilling to modify his understanding of his first encounter with the word. He should have checked it in the dictionary or paid more attention to the context where '*alloys*' and '*alloying*' occurred in text D.

Finally in text E, two errors were identified in Ahmad's TAPs. First, he stuck to the original meaning he knew for '*illustrations*' as رسومات (*drawings*) in '... *makes them clear illustrations* [examples] *of all these points*'. Second, he dealt with '*unnerving*' as a verb in '... *it is often so unnerving*...' and guessed its meaning as يخلق مشكلة (*creates an obstacle*). This was not a totally inappropriate guess, but rather a general guess that was prompted by the wider context of the text (i.e. technical translation, which is quite problematic for language students). This is good evidence for the view that L2 learners, even advanced ones, may not genuinely benefit from only implicit learning of L2 vocabulary. Thus, Nation (2001) asserts that learning vocabulary is a cumulative process and that L2 learners should learn vocabulary both explicitly and implicitly.

With regard to text C, Ahmad did not read that text and did not justify this decision. When he finished text A he jumped to text D and when he finished text E,

the last text, he decided to go back and read text B, but he then remarked that it was quite long and he preferred to complete text D. In fact, Ahmad was not a slow reader. He just preferred to read more passages in each text than required. Therefore, he had limited time to complete the task in text C. It could also be assumed that he opted to avoid text C because he found the other texts more interesting.

5.2.2.3 Patterns of Behaviour

Based on the analysis of Ahmad's TAPs and use of WSSs in texts A, B, D and E the following patterns of behaviour were recognised:

a) Proficiency Level

Ahmad's TAPs indicated that he benefited from his high level of language proficiency. Though Ahmad's performance in text A was characterised by his failure to deal with some underlined words according to their contexts, in texts B, D and E he proved himself to enjoy a high language proficiency level in terms of vocabulary store and grammatical knowledge. His proficiency level here was in line with that of Thamer, the very successful informant. Ahmad encountered a few unknown words in texts B, D and E (e.g. *alloys*, *genre*, *empirical*, *zymurgy* and *numismatics*). On the other hand, in text A he encountered a number of unknown words. These included 'serene', 'hammer out', 'superintendent', 'pastor', 'deter', 'invasive' and 'touched off'. However, Ahmad recognised a number of words and phrases that most other subjects failed to recognise (e.g. *nod*, *debate*, *counselling*, *saliva*, *conduct drug test*, *extracurricular activities*, and *incentives*). Therefore, based on the fact that in texts A and E Ahmad was able to recognise or properly deal with a number of vocabulary items anticipated as problematic by the experimenter and that he knew all the vocabulary items used in texts B and D (except *alloys* in text D), Ahmad's vocabulary store can be fairly rated as quite high. With regard to his grammatical knowledge,

Ahmad demonstrated a high level of grammatical competence. No contextual misunderstanding due to the difficulty of understanding a grammatical structure was identified in Ahmad's TAPs in texts B, D and E. As for text A, there is a case of partial understanding of the grammatical function of the word '*assorted*' in '*assorted parents, teachers, students and school board members*'. Ahmad explained this word with reference to the adjacent word '*parents*' only, though the word '*assorted*' clearly modifies '*students*', '*teachers*' and '*school board members*' as well. There is also a case of grammatical misunderstanding in text A when Ahmad incorrectly interpreted '*merits*' in '*they have studied the merits of urine, hair and saliva tests*'. Though he initially gave the correct meaning of this word, he suddenly altered his correct understanding of this word and said that it meant 'samples'. It was very clear that he was misled by '*urine*', the word following it, and understood '*merits of urine*' as '*samples of urine*'. Had he carefully read and understood the grammatical structure of the rest of the sentence, he would have stuck to his initial correct understanding of the meaning of '*merits*'. Once again, Ahmad's mistakes (both lexical and grammatical) in text A can be attributed to his failure to fulfil the requirements of the task properly; that is, to explain his understanding of the assigned parts of the texts and describe how he dealt with unknown words, especially the underlined ones. Ahmad simply looked at the underlined words in text A and tried to work them out in isolation from the immediate and wider context.

b) Contextual Understanding

With the exception of his overall understanding of text A, Ahmad's TAPs showed that his contextual understanding in texts B, D and E was excellent. He paid close attention to the argument in these three texts. Yet his contextual understanding of texts B and D was, to some extent, better than his contextual understanding of text E.

c) Use of the Dictionary

Ahmad used a monolingual dictionary. He was able to understand the definitions and their example sentences or phrases. He was also keen to learn the pronunciation of the words he checked. In some cases, he remarked that he needed his dictionary of phrasal verbs (which was, as he said, at home at that time) when the dictionary that he was using failed to provide any information about the phrasal verb '*hammer out*'. He also expressed a wish to have a bilingual dictionary along with the monolingual one that he had. This, it is assumed, indicates that he realises the advantages of the complementary use of both monolingual and bilingual dictionaries. Likewise, though he successfully understood the idiom '*we don't want to have our heads in the sand*', he vainly tried to check it the monolingual dictionary and stated that he could have found it if he had brought his dictionary of idioms. This, in addition to his remarks about having a dictionary for phrasal verbs and the usefulness of using monolingual and bilingual dictionaries in a complementary way, indicates that he has a good knowledge about the most efficient types of dictionaries for the task in hand and the most effective ways of using them. However, it was observed that he found the abstract words (e.g. *touched off* and *empirical*) more difficult to understand than the concrete ones when he referred to the dictionary to check their meanings. He was also sometimes found to apply the most common meaning of a word in a text despite its inconsistency with the context (e.g. *register*, *illustrations*, and *West* as a proper noun).

d) Guessing Unknown Words

Like most subjects, Ahmad preferred to check the dictionary even if he was quite sure of his guess. For example, though he correctly guessed the meanings of '*hammer out*', '*fact-files*' and '*abridgments*', he decided to double-check his guess in the dictionary. His speed and proficiency with the dictionary facilitated this. He tended to check the

dictionary quite frequently because he was able to improve his knowledge of new words without interrupting the rhythm of his reading. He enjoyed using the dictionary, and it was noticed that, in comparison to other subjects, he paid more attention to the pronunciation of new words. As for the strategy of word-segmentation, it was not clear whether he used it as a preliminary step towards guessing some new words or just wanted to demonstrate in his TAPs that he recognised the different parts of speech of these words. These words included ‘*simplification*’ [from *simple-simplify-simplification*]¹, ‘*expansion*’ [from *expand*], ‘*supplementary*’ [from *supplement*], ‘*lightness*’ [from *light*— opposite of *heavy*], ‘*resistance*’ [from *resist*], ‘*density*’ [from *dense*], ‘*unfamiliarity*’ [opposite of *familiarity* from *familiar*] ‘*distribute*’ [root of *distribution*] and ‘*exemplary*’ [from *example*]. However, it was obvious in other cases that he used the strategy of word-segmentation, as he himself clearly stated, in order to work out a number of new words. These included ‘*extracurricular*’, and ‘*oxidation*’. In text E, Ahmad cleverly linked ‘*awe*’ to ‘*awful*’. By contrast, he failed to apply the strategy of word-segmentation with the word ‘*invasive*’, though he first queried whether it was derived from ‘*invade*’ or not. He also did not analyse the parts of ‘*unnerving*’ and thought that it meant يخلق مشكلة (*create an obstacle*). He might have been confused about the prefix *un-* and concluded that ‘*not nerving*’ could not suit the context; ‘*not nerving*’ is in fact contrary to the context. Finally, Ahmad made three incorrect guesses with ‘*alloys*’ and ‘*per cent*’ and ‘*hardening-age*’. He interpreted ‘*alloys*’ as صفائح (*plates*), ‘*per cent*’ as ضعف عشر مرات (*ten times double*) and ‘*hardening-age*’ as إطالة العمر (*elongating age*).

¹ Words in italics are Ahmad’s TAPs.

e) Skipping Unknown Words

Ahmad showed a tendency to refer to the dictionary to check all new words, even if he could guess them accurately. Thus, he employed the strategy of skipping a new word four times only. Two instances of skipping were judged as good skipping because he skipped not very significant words. He skipped '*superintendent*' in text A and '*zymurgy*' in text E. The other two cases of skipping were judged as cases of bad skipping. He skipped '*range*' and '*passionate*', two relatively important words in text A.

f) Global Knowledge

The utilisation of global knowledge by Ahmad was totally absent in text A, though he showed a good use of his world knowledge in the other texts. After his preliminary reading of text B, Ahmad remarked that he had heard about graded readers before. His TAPs also showed that he was very familiar with the concept of graded readers. Using his world knowledge, he also made extra comments on the different features of aluminium mentioned in text D.

g) Time-management

In comparison to the other subjects, Ahmad's TAPs in texts B, D and E indicated that he was a fairly fast reader and quick user of the dictionary, bearing in mind that he needed extra time to verbalise his thoughts. In text A he focused on the underlined words only. He finished 31 lines from text B in 15 minutes, 42 lines from text D in 22 minutes and 22 lines from text E in 22 minutes. So, he read 95 lines in 59 minutes. This gives him an average of reading about three lines per two minutes. Ahmad decided first to postpone reading text C until after reading text E, but after he finished text E he preferred to read more passages in text D than he was basically required to. He seemed not to be interested in text C. On the basis of his high proficiency level

and efficient use of the dictionary, it is assumed that if he had dealt with text C he would have demonstrated the same level of successful use of WSSs that he demonstrated in texts B, D and E.

h) Planning

Apart from his performance in text A, Ahmad's TAPs revealed that he employed five types of planning actions. First, he tended to read the whole text in an attempt to understand the main idea of the text and in order to identify unknown words. Second, Ahmad also went through each paragraph before starting the process of dealing with unknown words. Third, he usually read the sentences in which new words appeared more than once. Fourth, Ahmad tended to make a preliminary guess for the sake of eliminating the dictionary suggestions, as he never took his guess for granted. Finally, he had a tendency to check new words in the monolingual dictionary by going through all the listed meanings and their example sentences or phrases.

5.2.3 Mishari (a successful subject)

5.2.3.1 Overall Assessment

The experimenter evaluated Mishari as a successful subject. He was one of a few subjects who needed the whole cassette length to record their TAPs. This may indicate his commitment to language learning. He spent quite a long time in performing the task: 22 minutes on text A, 21 minutes on text B, 29 minutes on text C, 12 minutes on text D, and 7 minutes on text E.

He demonstrated a reasonably advanced level in terms of vocabulary store and grammatical knowledge. He recognised many low frequency words and was able to solve most of the problematic vocabulary items. With the exception of a few cases, Mishari's pronunciation was also another indication of his high proficiency level.

Mishari used a minor bilingual dictionary, which he employed quite effectively, especially with regard to going through all the meanings suggested by the dictionary and being context sensitive when selecting one. His time-management was not very effective. He spent much of the time checking new words in the dictionary. Likewise, his planning of the task was not very successful. He did not read any of the text or paragraphs before he commenced the process of dealing with unknown words. His planning was focused on adjusting his comprehension of every paragraph once he finished dealing with unknown words.

On the basis of his relatively advanced level of vocabulary store, Mishari can benefit from controlled free reading of comprehensible authentic texts on a single topic or related topics. He can also benefit from advanced graded readers and word lists beyond the range of 3,000 words. His slow reading also needs to be addressed. In addition, it seemed that Mishari could use a monolingual dictionary quite successfully. Despite the fact that Mishari made a number of correct guesses, he also needs training in other reading strategies, especially planning the reading process, skipping unimportant new words, time-management and referring to the dictionary in a reasonable length of time.

5.2.3.2 Error Analysis

Mishari's understanding of the passages that he read in the first four texts was excellent. He did not complete the last text because the time ran out. His mistakes were generally minor and did not affect his comprehension seriously. These mistakes were generally spending quite a long time in looking up unknown words in the dictionary and doing no preliminary reading of the assigned texts.

In text A, Mishari dealt with '*nod*' in the title before reading the text, though he succeeded in finding its figurative meaning (*approval*) after checking the dictionary. He should have delayed dealing with any new words in the title until after reading the whole text. Though Mishari understood the first sentence in the first paragraph he misunderstood '*drugs*' to mean منشطات (performance-enhancers, usually taken by athletics) and did not revise his understanding, even though the context referred to a more negative type of drug. This mistake can be attributed to lack of knowledge about the problem of taking drugs in schools. Another mistake spotted in Mishari's TAPs in text A is that he mispronounced '*counselling*' and did not check its pronunciation when he referred to the dictionary. This may result in his being unable to recognise this word in listening.

In text B, in spite of knowing the meaning of '*strictly*', Mishari misunderstood the function of '*strictly*' in '*strictly limited vocabulary*' as '*strict and limited vocabulary*'. This may suggest that knowing the literal meaning of a word is not sufficient to acquire a word and that meeting a word in different contexts is necessary for effective acquisition.

In the second paragraph, Mishari selected the incorrect dictionary meaning for '*scheme*'. He found مخطط (plan) and رسم بياني (graph) but he chose رسم بياني (graph). This happened maybe because he did not read the whole text first. Otherwise, he would have understood that '*scheme*' was used to describe a graded plan for vocabulary learning. He also did not provide in his TAPs a statement of his understanding of the sentences '*some topic words*' and '*This has prompted...*'. These two sentences proved to be problematic to the majority of subjects. Further, he did not comment on the reference used therein. In fact, his performance in text B was characterised by not giving full TAPs of his comprehension. As for the word

'*factfiles*', Mishari literally broke it into fact + files (actual files ملفات حَقِيقِيَّة) though it meant مواضيع علمية (scientific topics), as was quite clear from the context.

Mishari's performance in text C can be rated as his least erroneous. It was characterised by his ability to use the dictionary effectively and work out the grammatical structures properly. Only two minor errors were observed. He mispronounced '*chalks out*' as '*shake out*' and understood '*man*' as رجل (a male human being) while it meant a human being إنسان (both males and females).

In text D, Mishari did not express his understanding of the text clearly. In fact, he did not revise his understanding of the text as a whole, as he had done with previous texts. This was perhaps due to the fact that he found himself running out of time, especially given that he still needed to read one more text. His more particular mistakes were his misunderstanding of '*alloys*' as مشتقات (substances taken from a metal). He also ignored '*measure*' and incorrectly divided '*bodywork*' into '*body*' and '*work*' (أعمال البدن *the work of the body*). He found his interpretation of bodywork quite odd, so he skipped this word.

Towards the end of the time allocated for the experiment Mishari started text E. He did not complete the text and did not have enough time to verbalise his understanding of it. This was generally due to spending most of the few minutes in checking the dictionary.

5.2.3.3 Patterns of Behaviour

Mishari showed the following patterns of behaviour in his TAPs:

a) Proficiency Level

Mishari showed a relatively advanced level of vocabulary store. He knew several of the problematic vocabulary items and recognised all other words that a successful

subject was expected to know. He made it clear that, in comparison to the majority of his classmates, he knew some infrequent words such as *'debate'*, *'serene'*, *'consensus'*, *'assorted'*, *'superintendent'*, *'offence'* *'deter'*, *'urine'*, *'merits'*, *'saliva'*, *'weary'* in text A, *'spirituality'*, *'pursuit'*, *'commands'*, *'constitute'*, *'firm'*, *'will'* (as a noun) in text B, *'fiction'*, *'prompted'* in text C and *'crust'* in text D. His advanced level in terms of vocabulary store is also evidenced in the correct guesses he made of a number of unknown words.

Mishari's grammatical knowledge was also advanced, at least in comparison to the majority of his classmates. As was the case with Ahmad, no contextual misunderstanding arising from a difficulty in understanding a grammatical structure was noticed in his TAPs. He correctly understood the grammatical function of *'assorted'* in *'... assorted parents, teachers, students and school board members'*. Likewise, Mishari realised that *'tests'* was modified by *urine*, *hair* and *saliva* in *'the merits of urine, hair and saliva tests'*. The grammatical structure of this phrase proved problematic for many subjects. The first sentence in the second paragraph of text A which also confused the majority of the subjects was properly understood by Mishari. The same was true with the second sentence in text D.

Several times in his TAPs Mishari obviously realised that a word may have more than one meaning, and that the selection of a particular dictionary meaning depends mainly on the context in which a word appears. He was also aware of the problem when the context accepts more than one slightly different dictionary meaning, as was the case with *'sovereign'* (*king* or *master*) in text C.

b) Contextual Understanding

Mishari's contextual understanding can be fairly described as near perfect, especially in text C. He was very attentive to the argument and his context-sensitivity when

checking the dictionary was exceptionally consistent. No contextual misunderstanding was spotted in his TAPs.

c) Use of the Dictionary

Mishari's use of the dictionary was his salient skill throughout his TAPs. He tended to check every unknown word and never chose to skip a new word. He also looked up some words that he knew, such as '*prompt*', '*context*', '*master*', '*saliva*', '*weary*', '*scheme*' and '*pursuit*'. He seems to have realised that these words were used in contexts which were unfamiliar to him. Despite the fact that Mishari used a minor bilingual dictionary, he used it skilfully. He guessed the meaning of new words before checking them in the dictionary after reading the whole sentence more than once and focusing on the preceding and following words. For every dictionary look-up, he went through the different meanings suggested in the dictionary, checked words before and after looking for derivatives, and properly selected the most appropriate meaning for the context in hand. Moreover, Mishari sometimes used the dictionary very flexibly in that he suggested more accurate meanings to go with the context than the meanings provided by the dictionary. When Mishari checked '*hammer out*' he did not accept any of the dictionary suggestions and went for his own guess because he found it more suitable to the context. He also refined the dictionary suggestion for the term '*social worker*' from عامل اجتماعي (social worker) to مشرف اجتماعي (social supervisor) because the latter was the Arabic equivalent of this job. He also interpreted '*assorted*' as مختارين (selected) instead of the dictionary translations منسق (classified) or منوع (of different types). This also occurred with '*pursuit*' and '*counselling*'. Despite the fact that he was using an English-Arabic dictionary he was not strictly looking for Arabic equivalents, but rather was concentrating on comprehension. In addition, he checked some words which were familiar to him if the context provided a slightly different

meaning. This may reflect his willingness and motivation to learn more words and further information about the words he already knows. His main problem was that he spent quite a long time in checking words in the dictionary; maybe he enjoyed using it. Although Mishari's pronunciation was generally an indication of his advanced proficiency level, he surprisingly mispronounced '*chalks out*' and '*counselling*' and did not amend his pronunciation after checking the dictionary for these two words.

d) Guessing Unknown Words

Another remarkable feature in Mishari's performance was that he correctly guessed a number of unknown words before checking them in the dictionary, because he never took his guessing for granted. These words included '*serene*', '*hammer out*', '*abridgments*', '*pursuit*', '*constitute*', '*tread*', '*steadfastness*' and '*crust*'. Mishari also used the strategy of recognising a word in a series list (explicitness of clues) to guess the general meaning of '*pastor*' as a job in text A as it was preceded and followed by job words. Similarly, he guessed '*Mutiny on the Bounty*' in text B as a title of a novel. He also used the strategy of word segmentation to guess the meaning of a number of words. These words included *lakeside* [*lake+side*], *exclusively* [*exclusive+ly*], *simplification* [from *simple-simplify-simplification*], *spirituality* [*spirit+al+ity*], *enable* [*en+able*], *steadfastness* [related to *fastness*], *commonest* [*common + est*], *lightness* [from *light*], *attractiveness* [*attractive+ness*] *density* [from *dense*] and *categorise* [from *category+ise*]. There was only one case where Mishari provided a correct guess without referring to the dictionary. This was with the word '*profound*' in text C. He was also able to correctly guess '*superintendent*' which he found unavailable in his minor dictionary.

e) Skipping Unknown Words

Mishari preferred to check all new words, even if he was able to guess them accurately. There was only one case of skipping, when Mishari came across '*measure*' in text D. He skipped this word maybe because he was not familiar with the context where the word was used. Mishari seriously needs training in this important strategy. A possible explanation for Mishari's tendency to look up every new word in the dictionary is a misconception on his part concerning the nature of L2 vocabulary acquisition in that not every new word urgently needs to be learnt.

f) Global Knowledge

Mishari's performance in text A may indicate that he was not familiar with its subject matter, because he understood '*drug testing in schools*' as '*testing a medicine in schools*'. Texts B, C and D revealed more use of his world knowledge, however. Mishari, unlike many of his classmates, seemed familiar with the idea of graded readers in text B. His faultless comprehension of the religious concepts in text C and the perfect Arabic equivalents that he gave for some problematic words can be attributed to his experience on a translation course for religious texts which he had taken previously. There were also two other cases of Mishari using world knowledge. He stated that the novel title in text B '*One-Way Ticket*' is commonly used for flight reservations. The word '*supreme*' in text C was linked by Mishari to '*supreme courts*'.

g) Time-management

Mishari's time-management was the weakest part of his performance. He tended to spend quite a long time checking new words in the dictionary. Thus, he needed 22 minutes to deal with 8 lines in text A (about 2¾ min per line), 21 minutes to deal with 17 lines in text B (about 1½ min per line), 29 minutes to deal with 17 lines in text C

(about 1½ min per line), 12 minutes to deal with 14 lines in text D (about 52 seconds per line), 7 minutes to deal with 4 lines in text E (about 1¾ min per line). He was the only subject who used the whole cassette length to perform the task. This commitment to the TAPs task may suggest a dedicated learner, but it can affect his reading strategies, especially guessing from the context as it may distract his attention from the stream of ideas. More importantly, his slow performance may make reading written texts somewhat boring.

h) Planning

Mishari never read a whole paragraph or a whole text before dealing with unknown words. He also tried to solve unknown words in the titles immediately. In general, his planning was confined to sentence-by-sentence activity and adjusting his comprehension of each paragraph afterwards. Sometimes he read the sentences in which new words appeared more than once. He also occasionally read more than one sentence. His approach to solving unknown words by using the strategies of guessing or skipping was not a strong part of his WSSs. He always preferred to double-check his guessing and never decided to skip any unknown word.

5.2.4 Nasir (a barely successful informant)

5.2.4.1 Overall Assessment

Nasir is rated by the experimenter as a barely successful subject. He demonstrated an average proficiency level as he knew some of the words anticipated as problematic, despite the fact that he encountered several other unknown words. He demonstrated a reasonable level of grammatical knowledge, though there were some gaps in his TAPs and he frequently focused on individual words, making it unclear to the experimenter how he interpreted some grammatical structures. He did not seem to

pay special attention to the pronunciation of new words. His overall understanding of the five texts can be reasonably rated as partial, though he demonstrated good understanding of some parts of these texts. He showed some degree of insensitivity to the sequence of ideas. He used the dictionary quite effectively, although with some problems, as we will see in his error analysis. With regard to his time-management, he finished 102 lines from the five texts in about 56 minutes. This gives him an average of about one minute and fifty seconds per line. His planning actions varied across the five texts and within the texts themselves, though he generally did not undertake any pre- or post-reading actions.

Nasir's use both of reading strategies and WSSs proved to be inadequate. He is a slow reader who badly needs to enlarge his vocabulary store and improve his grammar knowledge. He is recommended to make use of fluency-focused reading activities. Nasir can benefit from high-level graded readers. He can also make use of lower-level graded readers in order to improve his reading fluency. He needs to learn about the most effective types of dictionary according to the task in hand, and how to use them in a complementary way. Nasir should consider seriously how to develop his contextual understanding, his planning of reading and his guessing of unknown words.

5.2.4.2 Error Analysis

Despite the fact that Nasir demonstrated an average proficiency level, he made a number of errors that resulted in his achieving only partial understanding of the texts. In text A, for example, he skipped '*drug testing*' (line 2), maybe because he wanted to obtain more information from the text. However, he did not return to '*drug testing*' later on, in spite of the fact that this phrase carries the main idea of the whole text. He did the same with the phrase '*hammer out*'. Though he first determined its

part of speech, he skipped it once he realised that it was not available in the bilingual dictionary. Afterwards, he erroneously guessed its meaning ignoring the context in which it appeared. In fact, the phrase '*to hammer out a consensus on drug testing*' was what the whole text was about. He did not revise his understanding of the first paragraph when he finished reading it. He did not even try to work out the key phrase and immediately moved to the next paragraph. In paragraph two, when he came across '*offence*', he realised that the meaning he knew for '*offence*', as an aggressive physical attack, did not correspond to the available context. He read words which followed in order to eliminate the possible meanings in the dictionary. However, the dictionary failed to satisfy his search, so he decided to give up the search and return to it later, which he never did.

In text B, Nasir's performance was characterised by four features. First, he knew some problematic words, such as '*graded*', '*exclusively*', '*strictly*', '*prompted*', and '*burden*'. Second, he did not show his understanding of the text in detail. This can be attributed to his lack of familiarity with its topic. Third, he did not explain how he would have dealt with some underlined words. Fourth, as in text A, his approach to some new words ignored the context where they occurred.

In text C, Nasir's performance improved. This can be related to the familiarity of its contents, as a religious text. He was more responsive to the immediate context and sequence of ideas. He also proved to possess a good vocabulary store. However, he continued not to revise his understanding at the end of each paragraph or after reading the whole text. He particularly excelled when he guessed the phrasal verb '*chalks out*' (to draw the main lines). He also successfully interpreted the word '*context*' to mean '*environment*'. Nasir unquestionably demonstrated a higher proficiency level in text C than in texts A and B. This confirms the assumption that

familiarity with the topic of a text may play an important role in allowing L2 learners to benefit from reading as a source for improving their L2 vocabulary knowledge.

As in text C, Nasir's TAPs for text D revealed a good vocabulary store and grammatical knowledge. He encountered no problematic items that might have impeded his contextual understanding. His only failing in text D was ignoring the last sentence in paragraph one, mainly because he was apparently unable to associate the word '*measure*' with its context.

Finally, in text E, Nasir's TAPs did not demonstrate contextual understanding. This was because he dealt with new words individually. As in texts A and B, Nasir's partial understanding made him incorrectly pick up irrelevant dictionary suggestions. He also did not consider the sequence of ideas (i.e. general argument). For example, he chose the common meanings of '*register*' (with a university, for example) and '*illustrations*' (*drawings*). He spent a considerable time on new words. It was very clear that the type of text in terms of genre and complexity of content considerably affected his performance.

5.2.4.3 Patterns of Behaviour

The analysis of Nasir's TAPs showed a number of observable patterns in performance throughout the five texts. These can be summarised as follows:

a) Proficiency Level

Nasir showed an average vocabulary store and good grammatical knowledge. He recognised some difficult words that most subjects did not know, such as '*nod*', '*debate*', '*pastor*', '*assorted*', '*superintendent*', and '*deter*' in text A, '*graded*', '*exclusively*', '*strictly*', '*prompted*', and '*burden*' in text B, '*pursuit*', '*supreme*', '*sovereign*', '*conviction*', '*cognition*', '*intellect*', and '*will*' in text C, and '*density*' and '*crust*' in text D. He did not have any difficulty with any of the words that were

anticipated to be well known to the subjects of this experiment. His good understanding of some confusing grammatical structures was exemplified by his recognition that '*serene*' in '*a serene lakeside town*' is another modifier for '*town*' along with '*lakeside*' and that '*debate*' is used as a noun in the title and as a verb in text. In addition, unlike several subjects who separated '*urine*' and '*hair*', from '*saliva tests*', Nasir realised that the words '*urine*', '*hair*' and '*saliva*' were modifiers of the word '*tests*' in the clause '*they have studied the merits of urine, hair and saliva tests*'. In fact, his imperfect understanding was never caused by grammatical failings. But it should be noted here that because Nasir's primary focus was at word level in isolation from both the immediate and wider context, it was not clear how he comprehended several grammatical structures. In other words, in his TAPs he mostly tried to explain how he understood the problematic vocabulary items and paid less attention to the overall message of the text.

b) Contextual Understanding

Nasir was judged as demonstrating partial understanding of the texts that he managed to read. His TAPs revealed that he frequently dealt with new words in isolation from the overall context. He was not evaluative of his contextual understanding. He frequently continued to read though his understanding was imperfect. With the exception of his performance in text C, Nasir did not consider the sequence of ideas. In most cases, Nasir dealt with the new vocabulary items independently of their wider context.

c) Use of the Dictionary

Nasir used an English-Arabic dictionary throughout the task. He understood most new words correctly and showed a reasonable level of criticality towards the dictionary suggestions, basing his selection mostly on his understanding of the immediate

context. When the dictionary failed to provide the meaning of '*squarely*', he used the strategy of backtracking and immediately decided to check the meanings of '*square*'. He failed, however, to select the suitable dictionary meanings for '*constitute*', and '*profound*' in text C. When the dictionary failed to provide the meaning of some new words, he failed to work out their meaning, with some exceptions (e.g. guessing '*chalks out*'). He was also occasionally inattentive to the pronunciation of some new words when he checked them in the dictionary.

d) Guessing Unknown Words

Nasir was reluctant to make guesses. When he tried to work out some new words he preferred to double-check his guess in the dictionary. For example, he correctly guessed '*weary*' in text A, '*typically*' in text B, and '*chalks out*' and '*pursuit*' in text C, but decided to look them up in the dictionary. In general, he used a combined strategy of guessing with dictionary support, whereby he roughly guessed the meaning of new words in order to eliminate possible meanings in the dictionary before checking the latter, double-checked a guess or work out a new word which was unavailable in the dictionary. With regard to analysing a word form when guessing a new word, Nasir successfully applied the strategy of word-segmentation with a number of words like '*lakeside*', '*simplification*', '*factfiles*', '*expansion*', '*reinforce*', '*spirituality*', and '*unfamiliarity*'. There was a single case where Nasir made an incorrect guess and did not double-check his guess in the dictionary. He guessed the word '*bodywork*' in '*... the bodywork of trains, ...*' as '*the weight of trains*'. He also erroneously guessed '*constitute*' in text C as '*establish*' and '*profound*' as '*basic*'.

e) Skipping New Words

He used the strategy of skipping new words ineffectively. He skipped very important words and phrases. In text A, for example, he skipped the key phrase '*to hammer out*

a consensus on drug testing'. He also skipped '*drug use*' in paragraph two. Nasir also skipped '*cumulative*' and '*scheme*' in text B.

f) Global Knowledge

Nasir made good use of his background knowledge when he dealt with '*adjourned*' in '*they adjourned without agreement*'. He linked it to '*court is adjourned*' in TV series and movies. He also successfully used his background knowledge when he encountered the word '*exclusively*' in text B and linked it to the word '*exclusive*' and commented that this word '*is usually used by news channels*'. It can also be said that his global knowledge influenced his performance in text C, as it was a religious text.

g) Time-management

Nasir read 16 lines from text A in 12½ minutes, 34 lines from text B in 10½ minutes, 16 lines from text C in 9½ minutes, 15 lines from text D in 10 minutes and 21 lines from text E in 11½ minutes (102 lines in about 56 minutes). His reading speed seems to have varied from one text to another, depending on the familiarity of the topic of the text. His reading speed suffered a great deal in texts A and B. He was reasonably quick in checking new words in the dictionary.

h) Planning

Nasir did not engage in any planning before or after reading the texts. He immediately commenced dealing with unknown words. In addition, he never re-read any sentence or paragraph that contained unknown words. He did not even revise his understanding of any sentence or paragraph. He tended to move on to the following sentence or paragraph despite that fact that the sequence of ideas in his understanding was not logical. He was also found in many cases to leave gaps in his TAPs. This affected his contextual understanding and his selection of the most suitable meanings in the dictionary.

5.2.5 Ra'id (a barely successful informant)

5.2.5.1 Overall Assessment

The experimenter rated Ra'id as a barely successful subject, as he displayed an average proficiency level in terms of vocabulary store and grammatical knowledge. He did not recognise a number of the underlined words and failed to understand some problematic grammatical structures. His pronunciation was reasonably good. His overall understanding of the texts that he read was mostly in line with the intended message, with the exception of some sentences where his contextual understanding was to some extent partial. In several encounters with unknown words he clearly ignored the structure of the argument. This can be related to the fact that he repeatedly needed to refer to the dictionary. His use of the dictionary was occasionally marked by selecting inappropriate meanings. With regard to his time-management, Ra'id finished 53 lines from the first four texts in about 59 minutes and did not read text D. He displayed poor time-management especially in spending half the time on text C. His planning was also inconsistent. He never attempted pre- or post-reading action with any text.

It was clear that Ra'id needs to improve his approach to written texts by improving his reading strategies in general and his WSSs in particular. His performance was clearly affected by his poor planning and poor guessing strategies. In addition, his slow reading may suggest that he needs to enlarge his vocabulary store by using graded readers of high level and word lists beyond the most frequent 2,000 word families. He also needs to benefit from fluency-focused reading activities that concentrate on one topic or relevant topics and lower-level graded readers. The fact that Ra'id did not recognise some common words such as '*consensus*', '*series*' and '*profound*' may indicate that his exposure to English is inadequate.

5.2.5.2 Error Analysis

Ra'id's average proficiency level led him to commit a number of errors resulting in only partial overall understanding of the texts. His mistakes were largely due to his inability to select the suitable dictionary meaning for the context and his lack of global knowledge of the topics of texts A and B.

In text A, in particular, Ra'id's lack of global knowledge was very apparent. He could not understand the phrase '*drug testing*' and paused quite frequently in this text. When he read '*nod*' in the title '*With Court Nod, Parents Debate Drug Test*' and checked it in the dictionary he decided to go for انحناء في المحكمة (a bow in the court). The phrase '*hammer out*' was also literally comprehended as يتطرقون لمواضيع عديدة (discuss/hammer on several issues). When he finished reading the first paragraph he returned to '*drug tests*' and said the it meant '*school examinations on drug tests*' and gave his understanding of this sentence as المجموعة تجمعوا في أغسطس ليتطرقون لعملية الإجماع على امتحانات فحص تعاطي المخدرات , which literally translates into English as '*the group has gather in August to discuss the process of consensus on examinations of drug taking*'. Ra'id also understood '*assorted*' to describe '*parents*' only. He moved on to the second paragraph without revising his comprehension in more detail. In the second paragraph, Ra'id applied the meaning he knew of '*offence*' (aggressive physical attack) though it did not fit the context. He then ignored the following phrase '*... should bring counselling or punishment*' and focused on the rest of the sentence '*... and whether they can best deter drug use through education or testing*', which he understood quite well. The next two sentences were also well understood by Ra'id. Ra'id's planning was also a weak point in his TAPs, as he did not read the text again, revise his understanding or return to the parts that he carelessly skipped.

In text B, Ra'id dealt with the title in a way that showed that he was not familiar with the concept of graded readers. At word level, he incorrectly selected *يصنف* (*categorise*) when he looked up 'grade' in the dictionary and understood it as *قراء مصنفون* (*categorised readers*). But he got confused when he read '*... graded readers are complete books...*' Moreover, he literally interpreted 'stay' as *يجلس* (*sit down*) and did not know the meaning of 'series'. He did not understand the second part of the first sentence. Though Ra'id understood the first three sentences in the second paragraph, like the majority of the subjects, he did not understand the sentence '*[s]ome topic words ...*' and ignored the following sentence '*[t]his prompted some to call graded readers 'language learner literature'*'. As with text A, he moved on to the following text without revising his understanding of this text.

Like Mishari and a considerable number of his classmates, Ra'id performed better in text C. His use of the dictionary was generally successful. This text seemed to appeal to Ra'id's global knowledge. He was more responsive to the immediate context and sequence of ideas.

However, he spent quite a long time checking several unknown words. He could not understand the problematic sentence '*[t]his should be his firm conviction, not merely cognition of the intellect, but also of the will.*' He first ignored 'firm' and failed to select the suitable dictionary meaning of 'conviction'. He also understood the word 'will' as *مشيئة الله* '*the will of God*'. His perfect understanding of the last sentence of the second paragraph distinguished him sharply from the majority of his classmates. Again, he did not revise his understanding of the text.

Ra'id's TAPs in text D were very short (6 minutes only) because he read no more than 12 lines. He seemed exhausted and lost concentration. He first did not understand the sentence '*[i]t was not until the early part of this century...*'. He then

ignored '*measure*' in the last sentence and failed to understand the grammatical structure of '*... whenever weight is an important factor.*' He did not read the last sentence of the second paragraph and did not read text E because he decided to finish his TAPs at this point. As with previous texts, Ra'id did not revise text D.

5.2.5.3 Patterns of Behaviour

The following patterns of behaviour emerged from the analysis of Ra'id's TAPs:

a) Proficiency Level

Ra'id demonstrated an average vocabulary store and good grammatical knowledge. It was his overall contextual understanding that rated him above the unsuccessful subjects. As regards his vocabulary store, he did not know the majority of the underlined words in the four texts that he read. Despite this, he did not puzzle out any more common word, except the words '*consensus*', '*series*' and '*profound*'. In general, his vocabulary store can be rated as larger than that of the subjects from the two less proficient groups, the unsuccessful and very unsuccessful subjects. As for his grammatical knowledge, this was never observed to cause Ra'id difficulties. For example, he properly understood the grammatical structure of '*whether they can best deter drug use through education or testing*'. This clause proved problematic for several subjects. Similarly, Ra'id realised that the words '*urine*', '*hair*' and '*saliva*' were modifiers of the word '*tests*' in the clause '*they have studied the merits of urine, hair and saliva tests*'. Even when Ra'id occasionally demonstrated partial understanding, it was not caused by misunderstanding a grammatical structure.

b) Contextual Understanding

Ra'id displayed a good understanding of the texts that he managed to read, with the exception of some parts where he only partially comprehended the intended message.

This was due to dealing with some new words in isolation from the overall context. Besides, he was sometimes not evaluative of his contextual understanding. With the exception of his performance in text C, Ra'id did not accurately consider the sequence of ideas. The researcher found that Ra'id could have slightly improved his performance if he had implemented more effective planning strategies, especially revising his interpretation of unknown words after finishing the text.

c) Use of the Dictionary

Ra'id used the dictionary quite often, even to look up some words that he knew (e.g. *typically*, *dense*). This cost him a lot of time. He used an English-Arabic electronic dictionary. Though he failed to pick up the correct meaning from the dictionary when he checked '*nod*' and '*scheme*', he succeeded in working out most new words and was context-sensitive towards the dictionary suggestions. He tended to read all meanings, but was not keen to learn the pronunciation of some words. He used the dictionary as a final authority and never tried to refine the dictionary suggestions or put forward his own guess when the dictionary did not provide the meaning of certain new words.

d) Guessing Unknown Words

The strategy of guessing unknown words without dictionary back-up was not frequently employed by Ra'id. He used this strategy only with three words that appeared in the last sentence of the second paragraph in text C. He successfully guessed the words '*vicissitudes*', '*steadfastness*' and '*squarely*'. His familiarity with religious ideas in text C seemed to help him make some correct guesses. With regard to using the strategy of word-segmentation (i.e. manipulating word form) to guess some new words, Ra'id used this with '*lakeside*', '*exclusively*', '*simplification*', '*factfiles*', '*spirituality*', '*commonest*', '*structural*' and '*bodywork*'. It should be

mentioned here that only a few subjects were able to correctly guess the meaning of *'factfiles'* and *'bodywork'*.

e) Skipping New Words

Ra'id looked up or tried to guess almost all the unknown words that he encountered. It is apparent from his performance that he regards reading as a source for vocabulary extension and ignores other important strategies such as skipping. This revealed that Ra'id has a pressing need to improve his skipping skills.

f) Global Knowledge

Ra'id seems to have made remarkable use of his global knowledge in text C. He made good use of his religious background when he tried to guess some unknown words that were unavailable in the dictionary. His performance was obviously affected in texts A and B because these two texts included ideas which were new to him.

g) Time-management

Ra'id finished 53 lines of the first four texts in about 59 minutes (an average of about one line every 66 seconds). He spent 50% of the time on text C. He spent 15 minutes reading 8 lines from text A, 13 minutes reading 16 lines from text B, 25 minutes reading 17 lines from Text C, and 6 minutes reading 12 lines from text D. This was because his reading was slow and he paused frequently over unknown words, despite the fact that he checked the dictionary quite quickly.

h) Planning

Ra'id's planning was a very weak part of his performance. He was not consistent in his planning. His main problem was that he never read a whole paragraph or text before trying to work out unknown words and that he did not revise his understanding of any paragraph or text before moving on to another text. Even at sentence level he sometimes moved on to the following sentence or paragraph despite the fact that he did not grasp the sequence of ideas. Therefore, he left some gaps in his TAPs.

5.2.6 Hatim (an unsuccessful subject)

5.2.6.1 Overall Assessment

Hatim was rated by the experimenter as an unsuccessful subject. His proficiency level was below average. He could not recognise any of the underlined words and several other words, including frequent vocabulary items. In addition, his TAPs revealed that his incorrect understanding of some parts of the three texts that he managed to read was due to his poor understanding of the grammatical structure of some sentences and the grammatical function of some words. His incomplete TAPs show that his contextual understanding was quite weak and that he failed to understand many ideas in the three texts that he managed to read. He proved to be inattentive to contextual understanding and to the sequence of ideas in each text. With regard to his use of the dictionary, he used a bilingual dictionary quite efficiently in terms of selecting the most suitable dictionary meaning, but he spent much of the time trying to look up new words in the dictionary. He spent 75 minutes reading 39 lines from the three texts. Therefore, he could not complete the task in texts D and E. His poor management of the time indicated that he is not a potential vocabulary learner through free reading. He needs to practise graded and controlled reading in order to increase his reading fluency and time-management skills. His processing of the task in each text was also poor. He did not read any of the texts as a whole before commencing the process of dealing with unknown words in each text. He also did not revise his understanding after finishing any paragraph or any text. Though he first went through the whole paragraph, this did not help him to better comprehend the three texts. This can be attributed to his poor vocabulary store and weak grammatical knowledge.

Hatim, therefore, is recommended to undergo training in controlled reading with the aim of accelerating his language fluency. Spending a long time (75 minutes) reading 39 lines is, of course, a strong indication that Hatim may not enjoy free reading and would consequently not be motivated to practise this type of reading. Furthermore, he needs to systematically increase his vocabulary store through graded readers. For example, he can benefit from intermediate and advanced level graded readers. With regard to his WSS, Hatim needs to improve his reading comprehension skills at sentence level, paragraph level and text level; his grammatical knowledge; his dictionary skills; his guessing and skipping strategies; his time-management; and the planning of his reading.

5.2.6.2 Error Analysis

Hatim made a relatively large number of mistakes. Those included paying little attention to the sequence of ideas, incorrectly applying a frequent meaning of a polysemous word to the context, misuse of the dictionary, wrong guesses, bad skipping, poor time-management and poor planning. In text A, Hatim first ignored the title and immediately started reading the text. Though he read the whole paragraph first, his focus was on the underlined words: '*serene*', '*hammer out*', '*consensus*', '*pastor*', '*superintendent*', and '*assorted*'. Therefore, his TAPs did not display contextual understanding. Treatment of unknown words in isolation from their context is observed throughout his TAPs. In addition, when he finished paragraph one with poor understanding, he did not revise his understanding of this paragraph. The most serious mistake Hatim made in text A was his interpretation of the phrase '*to try to hammer out a consensus on drug testing in the schools*'. He understood it as كانوا يحاولون إيجاد اتفاق على تذوق الدواء في المدارس (*they're trying to find agreement on tasting medicine in the schools*). He confused the word '*testing*' as '*tasting*' and applied the

frequent meaning of 'drug' (دواء = medicine) which was inappropriate to the context. This mistake affected his understanding of the rest of the text, as it was the basis of his interpretation of the following sentences. This was quite clear in his TAPs of the second paragraph. First, he did not explain his understanding of the first sentence. This sentence contains information about what the people listed in paragraph one were holding their meeting for. He seemed to have been confused about '*whether they can best deter drug use through education or testing*' because of his misunderstanding of 'drug testing' in paragraph one. He ignored 'drug use' and understood 'education' as تعليم 'schooling' and 'testing' as اختبارات المدارس 'school examination'. Even when he learnt the meaning of 'deter' he failed to relate it to the rest of the sentence. In fact, he did not verbalise his understanding of the rest of the sentence. He continued to treat underlined words only in isolation and only considered immediate context. Though he correctly interpreted 'merits', he did not explain the whole phrase of '*the merits of urine, hair and saliva tests*' and dealt only with 'saliva' and 'merits' because they were underlined. This also happened with 'weary' and 'adjourned' in the next sentence. In addition to his inappropriate approach to new words, Hatim took 17 minutes to deal with 7 lines. In fact, he spent the 17 minutes jumping from one underlined word to another.

In text B, Hatim's unfamiliarity with the topic of the text made his understanding very poor. He paused for a while in an attempt to work out how '*graded readers*' are described as '*complete books*' saying '*readers are usually people, how come they are described as books!*'. After he read the first sentence and stopped to check 'exclusively' in '*not exclusively novels*' he verbalised that it meant مفردات حصرية (exclusive novels) and that '*strictly limited vocabulary*' meant مفردات قاسية (severe vocabulary). Here, Hatim demonstrated a low level of grammatical

knowledge. As in text A, he moved on to the next sentence before finishing the treatment of unknown words in the sentence before. He proved to be in need of more basic vocabulary and grammar knowledge before trying to engage in free reading. Hatim's TAPs in text B made it clear that he considered neither the wider nor the immediate context. The most astonishing example of this was his interpretation of the word 'call' in 'This prompted some to call graded readers 'language learner literature''. He said that 'call' in this sentence meant التحدث (*speaking*), a gerund. He finished this sentence and did not complete the paragraph. In general, his TAPs in text B were incomplete. That is, he moved on from some sentences before explaining how he understood them or how he would have dealt with unknown words. As in text A, he did not revise his understanding of text B.

Hatim also made a number of mistakes in text C. He continued to provide incomplete TAPs and to focus on underlined words. First, he failed to break 'spirituality' into its component parts 'spirit-tual-ity'. He understood the title 'Road to Spirituality' as الطريق إلى الدين (*road to religion*). He also did not guess 'chalks out' correctly as he assumed that it meant يصحح (*to correct*). The other misunderstanding that Hatim had in the first four-line paragraph was his misinterpretation of 'pursuit' as مواصلة (*continuation*). Despite his miscomprehension of this paragraph, Hatim moved on to the next paragraph without trying to reconsider the problematic vocabulary items. In paragraph two, Hatim focused on the underlined words and did not verbalise his understanding of the whole paragraph. Though he successfully selected the most suitable meaning of several unknown words in this paragraph on consulting the dictionary, this took him some considerable time. He needed 39 minutes to read 16 lines. In addition to not knowing several words in this text, Hatim proved to lack accuracy and concentration. This can be exemplified by the way he understood

'pursuit' (as *'continuation'*), *'endeavours'* (which he ignored) and *'will'* (as *'the will of God'*). Up to this point, Hatim took 75 minutes to do the task with 39 lines in the three texts: A, B and C. This gives an average of about two minutes per line. Therefore, Hatim had no time to read texts D and E.

5.2.6.3 Patterns of Behaviour

Hatim's TAPs showed patterns in his performance as follow:

a) Proficiency Level

Hatim's TAPs revealed that he had a limited vocabulary store. He did not know any of the anticipated problematic vocabulary items. He was also unable to identify many additional words, including some frequent words such as *'debate'*, *'consensus'*, and *'drug testing'* in text A, and *'to call'* (to name) in text B. In addition, Hatim mispronounced a number of words even after he checked them in the dictionary, e.g. *debate*, *deter*, *saliva*, *available*, and *mutiny*. With regard to his grammatical knowledge, Hatim's very partial understanding was in various cases due to his inability to comprehend the grammatical function of some words. In text B, for instance, he interpreted *'exclusively'* and *'strictly'* as adjectives. Hatim also interpreted *'call'* in *'to call'* as a noun. His grammatical understanding of the sentence structure in paragraph two was very poor. He opted to move on to the following paragraph instead of verbalising how he understood this paragraph. The grammatical structure of this paragraph proved to be very problematic for most subjects. Hatim's limited vocabulary and weak grammar knowledge made his contextual understanding very partial. His TAPs revealed that many of his ideas were incoherent. Hatim also did not adequately explain his understanding of some parts of the three texts that he read. He paused quite frequently because he realised that his line of thought was not

logical. For this reason, he used up his time on only the assigned parts in texts A, B and C.

b) Contextual Understanding

Hatim's contextual understanding can be rated as very partial. He seemed to have avoided expressing a full understanding of the three texts, and concentrated mainly on underlined words. Though he spent a long time on parts of the three texts (39 lines in 75 minutes), he was inattentive to context and logical argument.

c) Use of the Dictionary

Hatim used an electronic bilingual dictionary. He seemed satisfied with the information it provided. He demonstrated a good level of criticality towards the dictionary suggestions, especially in text C. This can be attributed to the fact that the topic words were transliterated into English and that Hatim was familiar with this kind of religious text through having studied a module called 'Religious Translation'. He needed to spend quite a long time searching for suitable meanings in the dictionary. He re-read the sentences which included new words and tried to build up a general meaning before checking the dictionary. However, he seemed not to care about the pronunciation of the words he checked.

d) Guessing Unknown Words

Hatim's TAPs revealed that he did not favour guessing new words as an independent strategy. That is, he always decided to check new words, regardless of how confident he was of his guess. In fact, a remarkable feature of some of his preliminary guesses before checking the dictionary was that they were totally irrelevant Arabic equivalents and were also irrelevant to the general concept of the immediate context. This may reflect an intention always to check the dictionary regardless of his preliminary guesses. This habit underlines the fact that he is not ready to benefit from free reading

in order to enlarge his vocabulary, because free reading requires intensive use of the strategy of guessing with occasional use of the dictionary.

e) Skipping New Words

In his processing of the reading task as well as dealing with unknown words, Hatim focused mainly on the underlined words. Therefore, it can be fairly said that he failed to perform the task efficiently. Part of his inefficient performance was his misuse of the strategy of skipping unknown words: especially in text A, Hatim skipped a number of words, including key words, e.g. '*deter*' and '*drug use*'.

f) Global Knowledge

The use of global knowledge by Hatim was absent in text A. He understood the text to be about assessing a type of medicine in a school lab. Likewise, Hatim's TAPs in text B did not indicate any use of his global knowledge. He seemed to be unfamiliar with the concept of graded readers. In text C, however, it could be assumed that Hatim used his religious knowledge to work out some unknown words.

g) Time-management

As mentioned above, Hatim took 75 minutes to read and work out unknown words encountered in the 39 lines that he read. He spent much of the time looking up many new words in the dictionary. Consequently, he did not look at texts D and E. The unsuccessful time-management on Hatim's part indicates that he is unable to benefit from free reading. Intensive dictionary reference inevitably distracts his attention from the wider context of each text.

h) Planning

Hatim's TAPs indicated that he followed no systematic planning or processing of the task. That is, with regard to WSSs his performance of the reading task was independent of his TAPs. In each text, he approached the titles first and never returned to them after finishing the text. Similarly, he never read a whole text before

trying to work out unknown words. Though Hatim read each paragraph twice and re-read sentences containing unknown words, his understanding was very partial. He never revised his understanding of a paragraph or text after finishing the task.

5.2.7 Basim (an unsuccessful subject)

5.2.7.1 Overall Assessment

Basim was rated as an unsuccessful subject. His proficiency level was below average. All of the underlined words and several other words were new to him. He also showed a below average level of grammatical knowledge. Because of his low proficiency level in terms of grammar and vocabulary knowledge, Basim reported incomplete contextual understanding and was unable to address some parts of the texts that he read. The fact that he encountered a large number of unknown words made him unresponsive to the sequence of ideas, as he focused mainly on looking up the meaning of the underlined words. Therefore, his contextual understanding displayed weaknesses. His use of the dictionary varied from one word to another, especially with regard to selecting the suitable meaning. But he spent a lot of time on dictionary use. His pronunciation was also inaccurate on more than one occasion.

His approach to new words was based on treating them in isolation from their context. This suggests that he needs to be aware of the role of context in learning the semantic features of vocabulary items. It also suggests that he needs to develop his reading skills, especially given that he did not read any of the texts before trying to solve unknown words and that he did not revise his understanding of any paragraph or any text at all. In terms of vocabulary store, Basim's TAPs revealed that he needs to benefit from word lists within the range of the 3,000 most frequent words. His reading fluency and vocabulary store can also be improved by first using intermediate and

advanced graded readers and then practising controlled reading on a specific topic. With regard to his WSSs, Basim demonstrated very poor guessing strategies, poor dictionary skills, and unreasonable skipping. He essentially needs training in developing these important WSSs. He also needs to improve his grammatical knowledge, as he failed to comprehend any of the problematic structures.

5.2.7.2 Error Analysis

Basim's main errors were ignoring some important words, planning his performance poorly, haphazardly guessing some new words, trying to solve unknown words in isolation from their context and making no final revisions. Basim's other mistakes included confusing two new words with known ones, checking words in the dictionary and ignoring them if he couldn't find the appropriate meaning.

Basim's performance in text A clearly showed that he was not familiar with the topic of the text and that his low vocabulary store noticeably affected his understanding. This started from the moment he began dealing with 'nod' in the title. He checked this word in the dictionary and decided that it meant انحناء (*bowing*) and understood the title as بين انحناء المحكمة وجد الآباء اختبارات المخدرات في المدارس (*between the bowing of the court, parents found drug examinations in schools*). He also considered the word 'serene' in the first sentence as a noun and 'lakeside' a proper noun. He stated that 'in a serene lakeside town' meant في هدوء مدينة ليكسايد (*in the calmness of the city of Lakeside*). Then, he interpreted 'school' as 'college', for no particular reason. The problematic verbal phrase 'hammer out' was also difficult for Basim. He found it in the dictionary as يقوم بمحاولات متكررة (*to make repeated trials*) but did not take up this meaning, deciding instead that it meant يؤكد (*to confirm*). He did not change his understanding of 'drug testing' as اختبارات المخدرات في المدارس (*drug examinations in schools*). Basim first ignored 'assorted' and then guessed it as 'supporting', with –

ing. He then confused the word 'board' as 'abroad' in 'school board members' and stated that it meant أعضاء المدرسة الخارجيين (*outside schools members*). Though he re-read the first paragraph, he did not revise his misunderstanding. His more serious mistakes began in the second paragraph, which proved more challenging to the majority of the subjects. Basim first failed to work out the word 'offence' though he checked it in the dictionary, and finally decided to skip it. It was from this moment that he began to lose sight of the sequence of ideas and started to concentrate largely on the underlined words. Thus, he ignored the rest of the sentence and focused on the underlined words 'deter', 'merits', 'saliva', and 'adjourned'. He looked up these words, taking the single word following each one into consideration. He isolated the elements 'merits of urine, hair and' from 'saliva tests'. He paused for a while and said that 'merits of urine' was difficult to link to the context, but did not try to read the paragraph again to better understand the phrase. His lack of grasp was clearly indicated by his confusing 'test' as 'testis', though he instantly corrected this mistake. Basim's indifference towards using the text to improve his knowledge of vocabulary was finally confirmed when he made no final revision of the text in spite of his obvious poor understanding.

Basim's performance in text B was similar to that in text A. The topic of text B was again new to Basim. He understood 'graded readers' as قراء المستويات (*readers of levels*). He mispronounced a number of words and did not know some frequent words, such as *prepare*, and *exclusively*. He continued to ignore words and sentences and dealt with some phrases and words in isolation from their wider context. He also continued to make no revision of the sentences and paragraphs that he read. His non-systematic approach towards new words in the text might suggest that he is generally not motivated to improve his vocabulary. Contrary to his overall performance in this

text, Basim exceptionally comprehended '*topic words*' in '*some topic words not in the vocabulary and proper nouns are also allowed.*' This sentence was not correctly comprehended by several subjects.

In text C, Basim performed the task similarly, but with some improvement. At word level, he was able to guess some words correctly and make correct choices of dictionary meanings. He also showed better planning in this text, maybe because he seemed to have understood the text better. For example, he was able to guess the verbal phrase '*chalks out*' correctly as يرسم الخطوط العريضة (*to draw the main lines*) and revised his initial selection from the dictionary meanings for '*context*' from النص (*text*) to بيئة (*environment*). Despite the fact that Basim's performance in text C improved slightly, he continued his non-systematic approach towards WSSs. Though he was quite familiar with the subject area of the text, his reading was slow because of the several unknown words that he encountered. Though his understanding of the first sentence in the second paragraph was quite good, he did not deal with '*sovereign*' and '*deity*' because they were not available in the dictionary. Basim's TAPs in the remainder of the text showed that he was relatively inattentive to the sequence of ideas as he was jumping from one underlined word to another paying little attention to the wider context. He also skipped some important words, such as '*constitute*', '*merely*', '*will*' and '*tread*'. His mistakes also included incorrectly guessing '*endeavours*' as '*requirements*' and '*squarely*' (adverb) as '*pressures*' (noun). As in texts A and B, Basim moved on to the following text without revising his understanding.

Similarly, Basim read text D providing incomplete TAPs and paying no attention to the connection between sentences and logical sequence of ideas. His planning did not improve, as he did not reread any sentence or paragraph. Much

worse, he skipped a number of important words, such as ‘*commonest*’, ‘*comprising*’, ‘*measure*’, ‘*possess*’, ‘*dense*’, ‘*bodywork*’, ‘*converted*’, ‘*reacts*’, and ‘*oxidation*’. His mistakes also included mistaking ‘*possess*’ for ‘*process*’ and ‘*farms*’ for ‘*frames*’. As was expected from the unsuccessful subjects, Basim did not understand ‘*But it was not until the early part of this century*’. Though he revealed a good understanding of the third paragraph, especially the last two sentences, he did not revise this paragraph or the text. He slowly read the following paragraph without articulating his understanding of its sentences or trying to solve the underlined words. His TAPs ended here and he did not read the last text.

5.2.7.3 Patterns of Behaviour

Basim’s TAPs revealed a number of observable patterns as follows:

a) Proficiency Level

Basim’s TAPs disclosed that he had a below average proficiency level and that his exposure to both written and spoken English was weak. His vocabulary store seemed to be quite small. He failed to recognise any of the underlined words as well as some other frequent words (e.g. *sheriff*, *prepare*, *exclusive*, *series*). His low proficiency level was also typified by his mispronouncing a number of words and misunderstanding the problematic grammatical structures. In fact, his poor contextual understanding was in part due to his failure to understand the grammatical function and meaning of some words and phrases.

b) Contextual Understanding

Basim’s proficiency level significantly affected his contextual understanding. Moreover, the fact that the topics of texts A and B were totally new to Basim

detracted from his performance. He encountered many unknown words and a number of confusing grammatical structures. When he found a sentence which was comprehensible in terms of its vocabulary items and grammatical structure, he tended to provide complete TAPs. As was the case with Ra'id, Basim gave the impression that he avoided demonstrating his understanding of some parts of the texts that he read and opted to focus generally on the underlined words. In general, Basim was noticeably inattentive to contextual understanding as he made no revisions improving his comprehension.

c) Use of the Dictionary

Basim used an electronic bilingual dictionary. When he was trying to solve '*hammer out*', he commented that he wished that he had his book dictionary. In general, he preferred to skip unknown words than look them up in the dictionary or try to guess their meaning. When he used the dictionary he generally demonstrated a reasonable level of criticality towards the context when selecting one of the dictionary meanings. However, he paid little attention to the pronunciation of new words. It was also observed that he sometimes decided to skip some words (e.g. *offence*, *merits*, in text A), when he failed to connect any of their dictionary meanings to the context.

d) Guessing Unknown Words

Basim demonstrated poor guessing skills. This was, of course, due to his poor vocabulary store owing to which he encountered many new words. Guessing the meaning of a new word was rarely his first choice. On the rare occasions when he made a preliminary guess of a new word his guess was always irrelevant to both the immediate and the wider context. This occurred, for example, with the words '*hammer out*', '*consensus*', '*debate*', and '*alloys*'. However, he made some good guessing attempts with '*pastor*' (in a list of job words), '*burden*', and '*chalks out*'.

Similarly, word-segmentation was seldom used by Basim. He used it only twice with ‘*simplification*’ and ‘*enrich*’ and failed to divide ‘*spirituality*’ into its component parts though he knew ‘*spirit*’.

e) Skipping New Words

As was observed earlier in his error analysis, Basim used the strategy of skipping unknown words quite frequently. But he was not systematic in his skipping. He skipped very important words which were necessary for understanding both the immediate and the wider context. Basim haphazardly ignored more new words in texts B and D. It was not clear why he sometimes skipped unknown words but on other occasions tried to guess them or look them up in the dictionary. By and large, his tendency to skip unknown words may suggest that he is not motivated to widen his vocabulary store through free reading and that he was bored owing to the large number of unknown words he encountered.

f) Global Knowledge

Basim showed no apparent use of global knowledge in texts A, B and D. The topics of these texts seemed to be new to him. This was very clear from his overall contextual understanding and comments. In text C, Basim gave a slightly better performance, maybe because he was familiar with its concepts as a religious text. However, he verbalised that he recognised ‘*resistance*’ in text D from the phrase ‘*water-resistant watches*’ usually printed on this type of watch.

g) Time-management

Basim took 60 minutes to read 102 lines (about 35 seconds per line). He finished 8 lines from text A in 17 minutes, 33 lines from text B in 14 minutes, 17 lines from text C in 18 minutes, and 34 lines from text D in 11 minutes. He did not read text E. In fact, the average time Basim spent per line does not reflect an advanced level of

performance. This is because he frequently failed to explain how he understood complete sentences and because he skipped several words.

h) Planning

Basim was not well organised in his planning. He did not read any of the four texts before he started to address unknown words. He also tried to understand the titles of the four texts before reading the texts and never returned to a title to revise his understanding. On the whole, he jumped haphazardly from one underlined word to another. However, there were some attempts to make a preliminary reading of some paragraphs. These included the second and third paragraph in text B and the first paragraph in text C. In the same way, Basim did not revise his understanding of any paragraph or text on finishing it despite the fact that he realised that his contextual understanding was not perfect.

5.2.8 Omar (a very unsuccessful subject)

5.2.8.1 Overall Assessment

Omar was rated by the experimenter as a very unsuccessful subject. Omar's TAPs exposed his low proficiency level in terms of vocabulary store, grammatical knowledge, contextual understanding, and use of the dictionary. His TAPs also revealed an incompetent level in using WSSs, especially guessing or skipping new words. He also failed to follow a systematic approach in performing the task or to show awareness of time-management. He took 71 minutes to read 32 lines. His poor planning was also a strong indication of a very unsuccessful subject. All types of planning (before, during and after reading the texts) and effective processing of the task were absent from his TAPs.

Omar is advised to consider his language proficiency more seriously. He needs to build up a sufficient vocabulary store, improve his grammatical knowledge, and learn effective skills for dictionary use. His reading skills need development in terms of selection of suitable level of reading materials, planning his reading, time-management, manipulation of global knowledge, attention to contextual understanding, and use of WSSs.

5.2.8.2 Error Analysis

The serious mistakes that Omar made while performing the task and his inability to benefit from free reading led the experimenter to rate him a very unsuccessful subject. In general, Omar committed the same types of errors in texts A, B and C. He followed no specific planning to perform the task, ignored key words, applied the most frequent meaning of polysemous words, provided incomplete TAPs and was a very slow reader. His TAPs were in many cases haphazard and suggested his inconsistent comprehension of the three texts that he read.

In text A, Omar identified '*serene*' as a noun and checked it in the dictionary as such. He also associated the meaning of '*hammer*' as a noun to the phrasal verb 'hammer out' in '*to hammer out a consensus*', so he interpreted the phrasal verb as لكي يضرب إجماعنا (*to hit our consensus*), making two mistakes here: '*hit*' and '*our*'. When Omar came across '*on drug testing*', the main idea of the text, he understood it to mean تجارب الدواء في المدارس (*medicine experiments in the schools*). Omar again erroneously applied the most frequent meaning of a key word which resulted in his failure to understand the main idea of the text and other subsequent ideas. After finishing the first paragraph with incorrect comprehension, Omar moved on to the following paragraph without revising his comprehension. Because of his erroneous understanding of paragraph one, Omar was unable to comprehend the first

sentence in paragraph two. In addition to skipping ‘*counselling*’, he misunderstood the sentences to mean:

ما إذا كانت أول إساءة تجلب عقاباً أو ... و ما إذا كانوا يستطيعون أفضل ... العقار يستخدم في التعلم و التجارب
= *whether a first wrong-doing brings punishment or ...and whether they can best use the medicine in learning and experiments.*

It is clear here that Omar’s illogical understanding was due to his earlier mistake of misinterpreting ‘*drug testing*’ in paragraph one. Similarly, Omar provided inconsistent and illogical understanding of the following sentence. He understood it as:

فهم يستخدمون مميزات البول و مميزات الشعر و مميزات التجارب
= *They are using the merits of urine, the merits of hair and the merits of tests.*

Omar took 26 minutes to read 8 lines (more than three minutes per line).

Omar’s performance in text B confirmed the fact that his miscomprehension of text A was due to his inaccurate understanding of several words in the text. He first ignored the title. After reading the first sentence, he first verbalised that ‘*graded readers are complete books*’ meant قراء كاملون (*complete readers*) then stated that it referred to كتب كاملة مصنفة القراء (*complete books whose readers are classified*). When he checked the dictionary to search for ‘*grade*’, he seemed not to understand how ‘*readers*’ in ‘*graded readers*’ are described as ‘*complete books*’. He also verbalised that ‘*strictly limited vocabulary*’ meant مفردات صارمة (*strict [i.e. stern] vocabulary*). He did not explain how he understood the first sentence as a whole. Instead, he tried to focus on the underlined words. This can be mainly attributed to the confusion he had with ‘*graded readers are complete books*’. As in text A, Omar’s inability to comprehend the main idea of the text affected his understanding of the subsequent ideas and his ability to properly understand new words. These misunderstandings mounted up and impeded him from utilising the text as a source for learning

vocabulary. Another mistake that Omar made in paragraph one was skipping ‘*grading scheme*’ in ‘*Here is the grading scheme of the Oxford Bookworms series*’. This key sentence was in an explanatory, introductory sentence to the following paragraph. In paragraph two, Omar’s performance improved, but he continued to spend a long time trying to solve new words or check them in the dictionary. However, towards the end of this paragraph he seemed to lose control over unknown words, so he did not finish the paragraph. In sentence three he confused ‘*within*’ with ‘*with*’. He also understood ‘*some topic words not in the vocabulary and proper nouns are also allowed*’ to mean:

بعض الكلمات ليست في المفردات الشائعة أو الأسماء الشائعة فهي مسموح بها

= *Some words are not among the frequent words or proper nouns. They are allowed.*

Omar ignored ‘*prompted*’ and failed to explain his understanding of ‘*This prompted some to call graded readers ‘language learner literature’*’. He provided an incoherent Arabic understanding:

و هذا ... تفسيراً تسميتها بالمصنف القراء

= *This... explanation calling them readers the classified the readers.*

He did not read the last sentence and immediately moved on to the next text without revising any part of the text. He took 35 minutes to read 14 lines.

In text C, Omar first skipped the title, and then he read the first paragraph. He focused on the underlined words: ‘*chalks out*’, ‘*pursuit*’ and ‘*mundane*’ and skipped ‘*context*’. Though he correctly guessed the meaning of ‘*chalks out*’ and selected the suitable meaning of ‘*mundane*’ from the dictionary, Omar failed to select the suitable meaning of ‘*pursuit*’ from the dictionary. He selected مواصلة (*continuation*). He also interpreted ‘*context of the mundane life*’ as ‘*the content of life*’. As usual, Omar moved on to the following paragraph without trying to improve his comprehension of the first one. In the second paragraph, he ignored or

misinterpreted a number of words. He misinterpreted ‘*hold supreme in the mind*’ as أن تكون معقودة في الأهم في عقل و قلب الإنسان (*to be tied tightly in the most important in the mind and heart of man*); ‘*God alone*’ as وحدانية الله (*God’s oneness*); and ‘*endeavours*’ as عبادة (*worship*). He ignored ‘*Master*’, ‘*sovereignty*’, and ‘*Deity*’. Despite his poor performance, Omar took ten minutes to read ten lines.

Omar did not read texts D and E because time was over. Up to this point, he had taken 71 minutes to read 32 lines.

5.2.8.3 Patterns of Behaviour

a) Proficiency Level

Omar’s TAPs showed his low proficiency level. It was very clear that he had a limited vocabulary store as he needed to check the dictionary for all the anticipated problematic items and many other words, including some frequent ones. He also proved unaware of the less frequent meanings of several words. As discussed in his error analysis, his misunderstanding of several phrases and sentences betrayed poor grammatical knowledge. His low level of contextual understanding was in many cases due to his grammatical misunderstanding.

b) Contextual Understanding

Omar demonstrated poor contextual understanding. He was not interested in considering the context when dealing with new words. It can be said that Omar focused basically on the underlined words. Besides, he did not refer to context at sentence, paragraph or text level. He never re-read a sentence, a paragraph or a text after he finished reading them. His weak contextual understanding was attributed to the following basic factors: (1) encountering numerous unknown words, (2) having a low level of grammatical knowledge, (3) not considering the sequence of ideas, and (4) not revising his comprehension.

c) Use of the Dictionary

Omar used a monolingual dictionary. He did not read the example sentences or phrases. Most of the time he took to perform the task was spent in consulting the dictionary. On a number of occasions Omar went through the different meanings suggested by the dictionary and did not pick up any one of them, as was the case with ‘*serene*’, ‘*assorted*’, and ‘*graded*’. A notable behaviour that Omar confirmed in his TAPs was his preference not to use the dictionary, especially in the case of polysemous words that he knew, but whose most frequent meanings were unsuitable to the given contexts. He frequently opted to apply the most frequent meanings of some polysemous words in spite of their inconsistency with the context (e. g., ‘*drug use*’, ‘*tests*’ and ‘*pursuit*’), or simply to skip them. With regard to pronunciation, Omar paid no attention to how new words are pronounced.

d) Guessing Unknown Words

Omar used this strategy on one occasion only. This was with ‘*chalks out*’ which was unavailable in the dictionary. Otherwise, he would always prefer to skip the word or look it up in the dictionary. In addition, he did not tend to make preliminary guesses before checking the dictionary. When he did so, his preliminary guesses were irrelevant. This occurred with ‘*pastor*’ [past+or], ‘*weary*’ [from ‘*wear*’] and ‘*abridgment*’ [from *bridge*=tower].

e) Skipping New Words

Omar failed to use this strategy systematically. He skipped a number of important words and spent a lot of time trying to understand insignificant ones. For example, he skipped the words used in the titles of texts A, B and C and the last sentence of the second paragraph of text B. He also ignored ‘*counselling*’, in text A, and ‘*Master*’, ‘*sovereign*’ and ‘*Deity*’ in text C. On the other hand, he spent quite a long time

searching for the meaning of some words used in the titles of the novels in the second paragraph of text B.

f) Global Knowledge

No sign of using global knowledge was spotted in Omar's performance in texts A and B. He never commented on any part of these texts with reference to his world knowledge. However, Omar's performance in text C improved slightly, possibly because of his familiarity with its religious content. This, however, is an assumption, as there was no specific indication in Omar's TAPs that he used his global knowledge in text C.

g) Time-management

Omar took 71 minutes to read 32 lines from the three texts that he read. He finished 8 lines from text A in 26 minutes, 14 lines from text B in 35 minutes and 10 lines from text C in 10 minutes. He spent most of his time looking up new words in the dictionary. His poor time management resulted in his having no time to read texts D and E. In addition, the fact that he spent so much time checking unknown words in the dictionary might have affected his motivation to perform the task well.

h) Planning

Omar followed no specific plan or procedures when he performed the task. He did not undertake any preliminary reading of any of the three texts that he read. He simply went through every sentence and paragraph only once and never opted to re-read any sentence or paragraph. Though Omar seemed to have been aware of his poor understanding of the three texts, he never tried to revise his understanding of any sentence or paragraph. Once he finished a text he immediately moved on to the next one and so on.

5.2.9 Fahad (a very unsuccessful subject)

5.2.9.1 Overall Assessment

Fahad's TAPs indicate a very unsuccessful subject. His TAPs revealed a very low proficiency level in term of vocabulary knowledge, grammatical knowledge, contextual understanding and use of WSSs. He also showed poor skills with regard to following a systematic plan for performing the task and time-management. He took 58 minutes to perform the task. But this relatively reasonable time did not reflect a good performance because Fahad ignored several words and sentences in texts A, B and D in addition to leaving out text C altogether. He did not do any pre-reading or revision of any sentence, paragraph or text.

Fahad's TAPs demonstrated that his vocabulary suffers from a lack of fundamental skills. He needs to build up an adequate vocabulary store especially of frequent words, develop his grammatical knowledge, learn how to select and use dictionaries effectively and recognise where skipping is and is not an appropriate strategy. Fahad also needs to understand the value of approaching new words with reference to both their immediate and wider context. He should, therefore, benefit from low and intermediate levels of graded readers before moving on to advanced level graded readers and controlled reading. This would be a useful means of consolidating and increasing his vocabulary store. Subsequently, he would be able to start to practise free reading in which he can more efficiently guess new words or skip them.

5.2.9.2 Error Analysis

Fahad made a number of fundamental mistakes that seriously affected his performance. Even though he stated that he was required in this task to demonstrate

his WSSs and to verbalise his comprehension of the assigned texts, he focused heavily on the underlined words (especially in text A) paying little attention to either the immediate or the wider context. In addition to displaying a very limited vocabulary store, inadequate vocabulary knowledge and poor contextual understanding, Fahad showed a strong tendency towards indiscriminate skipping of both important and unimportant new words.

In text A, Fahad did not verbalise his understanding of the title or of any of the sentences in spite of spending about 16 minutes before moving on to text B. Instead, he merely tried to solve the underlined words in each sentence and skipped the rest of the sentence. His first mistake at word level was with the phrase '*hammer out*'. He first checked it in the dictionary and found it to mean يضرب (*hit*), يطرق (*hammer*) or يطرد (*kick out*). It took him a while before he decided on '*kick out*'. His misunderstanding of the whole text was based more specifically, however, on his misinterpretation of '*drug testing in schools*' as فحص العقار في المدارس (*testing a medicine in schools*). Other errors in text A included thinking that '*superintendent*' and '*assorted*' are adjectives modifying '*parents*', mispronouncing '*deter*' as '*ditieir*', assuming that '*deter*' in '*... can best deter drug use ...*' is an adjective because it is preceded by '*best*' and followed by a noun, selecting an unsuitable meaning from the dictionary for '*merits*', mispronouncing '*urine*' as '*orion*', failing to understand the grammatical structure of '*the merits of urine, hair and saliva tests*', erroneously guessing '*touched off*' as توقف (*stopped*), and ignoring '*weary*', '*adjourned*', '*invasive*', '*extracurricular*', '*passionate*', '*considering*', '*range*' and '*incentives*'. Regardless of all these major and minor mistakes, Fahad simply moved on to the following text without revising any phrase or sentence.

In text B Fahad began to very slowly verbalise his understanding of whole sentences. His first mistake was confusion over ‘*graded readers*’ being described as ‘*complete books*’. In his confusion he comprehended it as ‘*students who are admirable readers*’. He provided the following incoherent interpretation of the first sentence:

القراء المصنفين في الكتب هم الكتب الكاملة... دائماً و ليس غالباً هي الروايات التي أعدت في ... المفردات المحددة من خلال ... و بقيت من خلال كلمات محددة...

= *The classified readers in the books are the complete books ... always and not often the books are novels which have been prepared in ... the limited vocabulary through ... and remained through limited words ...*

He considered ‘*strictly*’ an adjective and ignored it. He could not recognise that ‘*vocabulary*’ was preceded by two modifying words (*strictly* and *limited*). He also ignored ‘*typically*’ in the next sentence. The accompanying table helped a number of students to better comprehend the whole text, but Fahad opted to ignore it. The phrase ‘*the vocabulary grading scheme*’ in the last sentence in this paragraph was also problematic to Fahad. He understood it as:

و هنا مفردات مصنفة في 'البك ورمز' تبع أكسفورد ... في سلسلة 'البك ورمز' في مصنف أكسفورد ...

= *and here is a vocabulary categorised in 'The Bookworms' of Oxford ... in the series of 'The Bookworms' in the categorisation of Oxford*

For a second time, he seemed not to be aware of the possibility of modifying a noun by two modifiers (in this case *vocabulary* and *grading*).

He paused for a while, maybe because he realised that his interpretation was unacceptable. However, he made no revision and decided to proceed to the following paragraph. The first and only time that Fahad read more than one sentence at a time was when he read the first three sentences in the second paragraph in text B. This time he performed quite well. He ignored the titles of the novels. This is considered good skipping because the titles of the novels were not very significant for comprehension

of the intended message of the text. But, as expected, he failed to work out the problematic sentence involving ‘*some topic words ...*’. His interpretation was:

بعض العناوين الكلمات ليست في المفردات و الضمائر هي كذلك موجودة

= *Some of the titles the words are not in the vocabulary and the pronouns are also available.*

This interpretation showed that Fahad did not recognise ‘*topic*’ as a noun modifier for ‘*words*’ and broke it up into ‘*topics and words*’, confused ‘*proper nouns*’ as ‘*pronouns*’ and wrongly guessed ‘*allowed*’ as متاح (*available*). Then, he read the following two sentences and decided to ignore them and move on to the following paragraph. Yet again, Fahad had an improbable reading for the first sentence in the third paragraph, which was the last sentence that he read in this text. He interpreted it as:

القراء المصنفين باستطاعتهم أن يثبتوا أنفسهم في أي مرحلة دراسية... في أي مرحلة... بطرق عديدة

= *The categorised readers (students) can fit themselves into any school stage ... into any stage ... in different ways...*

In addition, in text B Fahad mispronounced some frequent words (e.g. ‘*death*’, ‘*simplifications*’, ‘*abridgments*’, ‘*prompted*’, ‘*expansion*’) and wrongly guessed ‘*within*’ as ‘*through*’. Finally, Fahad moved on to text D without making any revision.

Text C was completely skipped by Fahad, but text D witnessed no improvement in his TAPs. He continued to confuse new words with known ones (e.g. reading *metal* as *mental*, *until* as *unit*, *weight* as *white*), inattentively mispronounce some words, demonstrate very slow reading and apply the strategy of word-segmentation erroneously. These mistakes significantly affected his comprehension of the text. Fahad understood the first sentence, but because he confused ‘*century*’ as ‘*country*’ and ‘*quantities*’ as ‘*qualities*’ he understood the sentence as :

و لكن لم يكن حتى جزء مبكر من هذه المدينة ... هذه الدولة التي تنتج الألمنيوم بجودات عالية ... بجودات كبيرة ... أي ذلك الألمنيوم لم يكن موجودا من قبل لدى المدن التي كانت تنتج ... التي حاليا تنتج أجود أنواع الألمنيوم ...

= *But it was not even an early part of this city... this country which produces aluminum of top qualities ... big qualities ... that is, that aluminum was not available before in the cities that produce ... that currently produce the best qualities of aluminium ...*

Then he ignored the last sentence in the first paragraph. Another misinterpretation also occurred in the first sentence of the second paragraph. First, Fahad checked 'alloys' in the dictionary as 'mixture of two metals or more' but stated that it meant 'شوائب الألمنيوم' (*gangues of aluminium*). Then he confused 'least' as 'last'. He finally verbalised that the sentence meant:

الألمنيوم و شوائبه هو آخر..... المعادن المهمة التي استخدمت للأغراض التركيبية

= *Aluminium and its gangues is the last important metals which are used for structural purposes.*

Fahad's lack of concentration was also evident in the following sentence: 'This property makes them particularly useful whenever weight is an important factor'. The adverb 'particularly' was treated as an adjective 'particular' while the adjective 'useful' was treated as a noun 'usefulness'. Finally Fahad mistook 'factor' for 'factory'. Accordingly, he came up with the following vague interpretation:

هذه الخصوصية صنعت منهم فائدة خصوصية أينما ... بين مختلف ال... هذه الخصوصية في المصنع ... هذه الخصوصية صنعت من المصانع ... هذه الخصوصية في صناعة الألمنيوم صنعت له أهمية كبيرة على أي وزن/ثقل يكون المصنع المهم...

= *this property made them a special usefulness whenever among the different ... this property in the factory... this property made the factories ... this property in the manufacture of aluminum made for it a big importance on any weight the important factory is ...*

In fact, he read this sentence a number of times and was certain that his comprehension was erroneous. Similarly, the following sentence was partially understood because Fahad assumed that the word 'bodywork' meant الهيكل العملي (*the practical body*). In the last sentence of this paragraph Fahad first mistakenly stuck to

the meaning he knew of 'light' (إضاءة —opposite of darkness, or making dark) when he divided 'lightness' into 'light + ness'. He seems to have realised that his guess was not in accordance with the context because it took him quite a long time to deal with 'lightness'. After that, he again mistook 'factor' for 'factory' in 'as an essential factor' and read it to mean 'as an essential manufacturing' (صناعة أساسية) and produced the following odd interpretation:

أنه حتى في الإضاءة التي لن تكون صناعة ضرورية مثل المباني ...

= *It is even in the lightness [opposite of darkness] which will not be a necessary manufacturing like building ...*

After that, he ignored the key word 'attractiveness' and interpreted 'appearance' as

حضور (attendance) and took the sentence to mean:

لها حضور قوي... نصيب الألمنيوم في تلك الصناعات و الإضاءات ... لها دور مهم في صناعتها ... وكذلك هو الخيار الأمثل في تلك الصناعات ...

= *... it has a strong attendance ... the share of aluminium in these industries and lights ... it has an important role in its manufacturing ... also it is the best choice in these industries ...*

Making no revision of any of the sentences or problematic phrases or vocabulary items, Fahad stopped here and immediately started to read text D.

Fahad took only ten minutes to deal ineffectively with the unknown words in eight lines from text E. In this text, he confirmed some of his behaviour observed in texts A, B and D. He continued to mistake words, to fail to select a suitable meaning from the dictionary, and to mispronounce common words (e.g. *however*, *genre*, *discipline*, *anthropology*). He first mistook the title 'technical translation' for 'tactical translation' (الترجمة التكتيكية), and 'texts' in the first sentence for 'tests', and failed to decide on any of the dictionary suggestions when he checked 'genre'. In the second sentence Fahad made a number of mistakes. He first ignored 'since', oddly misinterpreted 'language students' as 'the language of students' and consequently

interpreted 'not trained in' as لا تمارس (*not practised*), which he assumed to refer to the language of students. Shortly after, Fahad once more failed to select any of the dictionary meanings for 'devote' and guessed the phrase '[t]his chapter is devoted to problems' as 'to stop problems'. Besides, he was still mistaking 'texts' for 'tests', so he produced the following incoherent interpretation:

إن معظم لغة الطلاب ليس تمارس بطريقة علمية ... أو ليست تمارس في العلم أو التقنيات ... فهم دائماً ... فهم دائماً في خوف ... يعني هؤلاء الطلاب متخوفون من الاختبارات التكتيكية ... و هذا الفصل يوقف المشاكل أو يحاول علاج المشاكل التي تواجه المترجمين في اختبارات من هذا النوع ... من هذا التصريف النوعي ...

= *most of the language of students is not practised in a scientific way ... or it is not practised in science and technologies ... they are always ... they are always in worry ... that is, these students are worried about the tactical tests ... and this chapter stops the problems or tries to solve the problems which face translators in tests of this kind ... of this qualitative arranging ...*

Similarly, the third sentence was misread. Fahad misunderstood it to mean:

و بالترجمة التقنية ... فإننا نعني الترجمة في ... فإننا نعني ... اختبارات وصفية مكتوبة في السياق العلمي ... أو الرسائل التقنية ...

= by 'technical translation' ... we mean the translation in we mean ... descriptive tests written in the scientific context ... or technical letters ...

This interpretation showed that he continued to confuse 'texts' with 'tests', was unable to work out the grammatical structure of this sentence, ignored 'empirical' and understood 'disciplines' as الرسائل التقنية (*technical letters*).

Fahad read the fourth sentence, looked up 'anthropology' in the dictionary mispronouncing it as 'anthology' and ended his TAPs.

5.2.9.3 Patterns of Behaviour

The serious errors that Fahad made throughout his performance led to his rating as a very unsuccessful subjects His errors exposed his low proficiency level and poor grammatical knowledge. It was very clear that Fahad lacks basic reading skills and that he badly needs to reconsider his WSSs.

a) Proficiency Level

Fahad's proficiency level was extremely low. His TAPs gave a strong indication of the limitations of his vocabulary store. His poor contextual understanding, as can be seen in the following subsection, was basically due to his encountering many unknown words and being unable to comprehend the grammatical structure of several phrases and sentences. He was observed several times to misunderstand phrases written in the passive voice and to fail to recognise the part of speech of some words. Mispronunciation, skipping key words, word confusion and slow reading were also noticeable features in Fahad's performance.

b) Contextual Understanding

In text A, Fahad totally ignored the immediate and wider context when he tried to solve new words. He simply jumped from one underlined word to another. Consequently, he failed to understand the text or successfully solve problematic vocabulary items. Though he began to pay more attention to the context in texts B, D and E, his contextual understanding did not improve. He continued to address unknown words in isolation from their context. The explanations he gave in Arabic of some sentences and phrases were mostly incoherent and sometimes illogical. Some of them were even incorrect Arabic sentences both grammatically and semantically. He rarely took account of contextual understanding. His poor contextual understanding was, of course, due to his poor vocabulary knowledge, poor grammatical knowledge and his unsystematic approach towards the reading task. As discussed in his error analysis, Fahad's poor contextual understanding was also the result of frequently confusing certain words with other similar sounding words.

c) Use of the Dictionary

Fahad used the Al-Mawrid minor dictionary. He checked the dictionary 15 times. He was able to select suitable meanings of unknown words 8 times only. This occurred when the word in question had one meaning or where the different meanings given in the dictionary are not closely related. These words included '*serene*', '*consensus*', '*pastor*', '*debate*', '*saliva*', '*expansion*' and '*anthropology*'. On other occasions where the dictionary provided very closely related meanings, Fahad skipped the unknown word and moved on to the next word or sentence. This happened 7 times, with '*hammer out*', '*assorted*', '*merits*', '*graded*', '*alloys*', '*genre*' and '*devoted*'. This might be attributable to the fact that his contextual understanding was too poor to allow him to select the appropriate meaning from the dictionary. In addition, on the other occasions that example sentences were given in his minor dictionary, Fahad did not read them. With regard to pronunciation, Fahad paid little attention to how new words are pronounced, despite the fact that the dictionary he used provided a pronunciation transcription.

d) Guessing Unknown Words

Fahad used the strategy of guessing new words four times only. He erroneously guessed '*within*' as '*through*' and '*disciplines*' as '*letters*'. The other two successful occurrences were with '*Earth's crust*' and '*comprising*'. There were also five cases of guessing a new word by analysing its affixes and roots. Three cases were successful: with the words '*commonest*', '*structural*' and '*categorise*'. The two unsuccessful cases were with '*bodywork*' as '*the practical body*' and '*lightness*' as the opposite of darkness. In most cases Fahad preferred either to check new words in the dictionary or ignore them.

e) Skipping New Words

Fahad showed a strong tendency to skip unknown words. But he failed to use this strategy systematically. That is, he skipped important words and sentences in the texts that he managed to read. For example, he did not try to solve any word used in the title of text A. Indeed, he ignored all the words that were not underlined in text A. Some of these were key words. He also ignored two underlined words in text A, namely '*deter*' and '*adjourned*'. In text B Fahad ignored the word '*strictly*', the second sentence completely and the last three sentences in the second paragraph. There was one case of skipping in text D, with the word '*attractiveness*'. Fahad's inappropriate use of this strategy definitely affected his ability to successfully solve some problematic items and to reasonably comprehend the sentences that he read.

f) Global Knowledge

There was no case of Fahad using global knowledge throughout the four texts, something which was especially apparent in texts D and E. Fahad may not be blamed in texts A and B because they discussed what seemed to be largely new ideas to the vast majority of the subjects. But it is quite hard to explain why a final-year university student who is majoring in English and translation did not demonstrate any sign of global knowledge in text E, which was about technical translation.

g) Time-management

The relatively reasonable time that Fahad spent (58 minutes) in performing the task was not by any means an indication of effective time-management. This was because he just read the underlined words in text A, skipped a number of sentences in text B, did not read text C, and read 14 lines only from text D and 8 lines from text E.

h) Planning

Fahad's poor comprehension was in part due to the non-systematic approach that characterised his TAPs. He did not do any preliminary reading for any of the texts or

paragraphs that he read. Though he paused quite frequently, he never decided to read a sentence, a paragraph or a text again. His incoherent and incomplete Arabic interpretations never led him to edit his interpretation. Throughout his TAPs, he continued to move to the next sentence or text, making contextual comprehension and word-solving more difficult for himself.

5.3 Summary of TAPs Findings

The analysis of the subjects' TAPs has provided rich data on their use of WSSs. Below is a summary of the overall findings from the analysis of the subjects' TAPs. The findings relate to the criteria used to classify the subjects into the allotted five groups. The criteria are not independent factors, but rather interrelated. The most significant factor affecting the classification of the subjects into the five groups was found to be their proficiency level (see table 1 in 5.1 above). Proficiency level was strongly reflected in subjects' contextual understanding, the second most effective factor. These two factors are also found to correlate with the factors of dictionary use and reading speed and coverage. The least inter-related factor is task planning. Yet the quality or absence of planning on the part of the subjects is found to be in line with their proficiency level. The most significant finding in respect of planning was that the subjects' contextual understanding was considerably affected by their planning, especially in terms of pre-reading a text or revising overall comprehension later on.

5.3.1 Proficiency Level

- a) Despite the fact that some of the less successful subjects used a number of WSSs in their TAPs, their proficiency level prevented them from understanding the text perfectly and benefiting as much from the texts in terms of vocabulary learning as the more successful subjects did.

- b) The more successful subjects demonstrated a good vocabulary store, at least in comparison to the other subjects. This was evidenced by their understanding of all of the anticipated problematic words and by their good comprehension of the grammatical structures that were problematic to the majority of the subjects. The more successful subjects were also distinguished both by having better pronunciation, and by paying more attention to the pronunciation of new words on consulting a dictionary. By contrast, the less successful subjects paid little attention to how new words are pronounced. Inevitably this affects their comprehension of these words in listening and their ability to use them in speaking.
- c) The analysis of some subjects' TAPs revealed that they sometimes do not know some frequent words while they do know other less frequent ones. This may suggest that they did not develop their English vocabulary in a systematic way.
- d) The more successful subjects were more capable of using the context to understand less frequent, and unfamiliar, meanings of some polysemous words. The less successful subjects tended to stick to the most frequent meaning of polysemous words even if this made their understanding inconsistent with the context. For example, some subjects understood the word '*offence*' in text A to mean '*aggressive physical attack*', though the context implied a different meaning. The word '*testing*' in '*drug testing*' in text A was misunderstood to mean 'school examinations'. Those who also associated the most frequent meaning of '*drug*' in their experience, namely 'medicine', understood '*drug testing*' as 'a school examination on medicine – in a laboratory or a set exam, for example'. In fact, some subjects found encouragement in the wider context to interpret it thus, as the text referred to the problem of drug addiction in schools.

Other examples of polysemy misunderstanding included '*register*' (misunderstood as 'to enrol on a university'), '*illustration*' (misunderstood as 'drawing'), '*test*' (as school exam), '*education*' (as 'schooling'), '*readers*' (as referring to people), '*lightness*' (as the noun from 'light' – opposite of dark)

- e) The analyses of the TAPs show that the more successful subjects were more motivated to learn new words and learn more meanings of the words that they already knew. They were also keen to double-check some known words that were used in contexts new to them. They exhibited more comprehension coverage in their TAPs. The less successful subjects were found to leave gaps when verbalising their comprehension.
- f) The experiment shows that the subjects of each group need specific VLSs in order to improve their English vocabulary systematically. The more successful subjects should make use of the more metacognitive strategies that aim to maximise exposure to English through media sources, and practise free reading of selected material in order to consolidate and widen their vocabulary knowledge. The less successful subjects, on the other hand, should build a sufficient vocabulary store more explicitly through word lists and word cards. They also need training in using the dictionary and should use graded readers to develop their guessing skills and then practise controlled reading.
- g) The current experiment corroborates the fact that failing to understand one or two words may cause serious comprehension problems to low proficiency learners.
- h) The poor use of discovery strategies by the less successful subjects is a serious problem. Their failure to find out the meaning of new words will, of course, lead to poor learning outcomes.

- i) The less successful subjects failed several times to recognise the part of speech of new words or a passive voice structure. The embedded dependent clauses within some sentences also confused them. Analysing the immediate context proved problematic for the less successful subjects where the main parts of a sentence (e.g. verb, subject, object) are separated. For example, the verb '*deter*' in text A proved problematic because it is separated from the auxiliary verb '*can*' by the word '*best*' in '*... whether they can best deter drug use ...*'
- j) The current experiment confirms the phenomenon of confusing new words with known ones on the part of low proficiency learners; synformy in Laufer's (1997) terms. In particular, Laufer found that synformy is more challenging for speakers of Semitic languages. Of the ten types of possible synformic confusions (see appendix nine), Laufer found that two types of synforms proved to be more problematic than others: (1) when the two synforms differed according to suffixes (e.g. *industrial industrious; comprehensive comprehensible*) and (2) when the two synforms were identical in consonants but different in vowels (e.g. *conceal cancel, adopt adapt, proceed/precede*). These two types of synformy represent almost all cases of word misidentification. For example, some subjects misidentified the words '*whether*' as '*weather*', '*debated*' as '*doubted*', '*consensus*' as '*consciousness*', '*testing*' as '*tasting*', '*serene*' as '*siren*', '*metal*' as '*mental*', '*until*' as '*unit*', '*weight*' as '*white*', '*century*' as '*country*', '*quantities*' as '*qualities*', '*factor*' as '*factory*', '*frames*' as '*farms*'. Laufer (1997) has warned against this misidentification phenomenon, stating that learners of low proficiency level have been found frequently to misidentify new words as known words of similar pronunciation or spelling, without assessing their understanding against the immediate or wider context. Very serious comprehension problems

occur when a learner thinks that he/she knows a word but in fact does not, especially when comprehension is then forced to accommodate to the misinterpretation (Huckin and Bloch, 1993). This occurs either because of failing to notice available cues or failing to take the context seriously.

5.3.2 Contextual Understanding

- a) The more successful subjects paid more attention to their contextual understanding, tending not to move on to the following paragraph or text before making sure that they adequately comprehended the previous section.
- b) The less successful subjects tended to move on to the following sentence or text without making any revision, despite the fact that their line of thought was illogical. Their misunderstanding mounted up throughout the text, especially when they failed to comprehend a key word at the beginning.

5.3.3 Use of the Dictionary

- a) The subjects used different types of dictionary. The type of dictionary did not significantly affect the performance of the more successful subjects. That is, they performed quite well with all types of dictionaries. Some of the less successful subjects who used monolingual dictionaries failed to deal with new words efficiently. They seemed to understand the general meaning of some new words, resulting in only partial understanding of the context. The average and below-average proficiency level subjects who used English-Arabic dictionaries demonstrated better understanding than their classmates of similar proficiency level who used monolingual dictionaries, especially when their bilingual dictionaries provided total lexical equivalents. There were also a few subjects who used bilingualised dictionaries (English-English-Arabic). The majority of the less

proficient subjects used minor pocket English-Arabic dictionaries which provided insufficient information and omitted several words that proved difficult for those subjects.

- b) The more successful subjects were more successful in using the dictionary's example sentences, pronunciation transcripts and grammatical information. They were also more successful in selecting the most suitable meanings from the dictionary. In fact, they used the dictionary in a more flexible way than the less successful ones. The former used the dictionary to improve their comprehension, whereas the latter were mainly searching for Arabic equivalents, regarded the dictionary as the final authority and allowed it to control their understanding of the context. The more successful subjects were seen on different occasions not to be satisfied with the information provided by the dictionary and tried to give their own explanations or further Arabic translations.
- c) Some subjects who usually use bilingual dictionaries said in the interviews that they do not read the dictionary example sentences because the sentence in which the new word appears is enough for them.
- d) The less successful subjects showed a tendency to stop at several words. This distracted their attention and made their reading into a word-by-word process, whereby they could less easily make use of the wider context for contextual understanding.
- e) It was very clear from their TAPs that the less successful learners need training in using the dictionary more effectively, especially with regard to selecting a suitable dictionary, and learning about the good features of an effective dictionary and the drawbacks of some others.

5.3.4 Guessing Unknown Words

- a) The subjects differed in their use of guessing. The more successful subjects applied the strategy of guessing at a deeper level of processing than the less successful ones, who seemed to make very quick preliminary guesses en route to the dictionary. This made their guesses mostly irrelevant to the context. The use of guessing strategies, according to Oxford (1990:7), is what distinguishes good language learners from poor ones, who *'often panic, tune out, or grab the dog-eared dictionary and try to look up every unfamiliar word harmful responses which impede progress toward proficiency'*.
- b) Most cases of guessing involved cues within the same sentence. A number of studies report that clues for guessing word meanings are more likely to be within the sentence level (Nation, 2001). Chern (1993) explored the WSSs used by Chinese students while reading in English. She found that the sentence-bound cues are more frequently used than backward and forwards cues. The more proficient readers, however, performed better in utilising backward and forward cues.
- c) Some subjects applied the strategy of analysing word-parts inaccurately or erroneously. This happened with *'superintendent'* (into super + attendant: حضور مهم [a high-class attendant]), *'pastor'* (into past + or: عالم تاريخ [historian]). Some words were also misleading. For example, the word *'unmervig'* was misunderstood as 'not nerving' (with the negative prefix *un-*, as in 'important' and 'unimportant').
- d) Despite the fact that some subjects reported that they were trained in using guessing strategies, the vast majority of the subjects were not found to be competent at working out new words. One explanation of this discrepancy could

be that the successful use of guessing strategies is possible only when the learner enjoys a reasonable proficiency level in which new words and problematic syntactical structures are kept to a minimum.

- e) The strategy of guessing new words was used by most subjects primarily in order to eliminate the possible meanings suggested by the dictionary before checking them. However, it was quite clear that some free guesses (where no dictionary look-up follows) and some selections of possible dictionary meanings were incorrect, thus distracting the subjects from the main flow of ideas. In fact, their partial or inaccurate contextual understanding mounted up throughout the text the more they failed to properly guess or check new words in the dictionary. There were some cases in which the less successful subjects twisted their interpretation of the context to suit their incorrect guessing, rather than allowing interpretation of the context to modify their guess of the meaning. For successful reading and successful guessing of subsequent new words it is important to understand a new word at the beginning of a text (Scholfield, 1997). More seriously, learners may adhere to such incorrect guesses or dictionary look-ups in future reading and find it quite difficult to abandon their early misunderstanding. An example of this case is the way Ahmad (a successful subject) held on to the meaning of 'horrible' that attached to '*deter*' in text A.

5.3.5 Skipping New Words

- a) The subjects' contextual understanding was also affected by their use of the strategy of skipping new words. Unlike the very successful and successful subjects who in their rare instances of skipping skipped unimportant new words, the less successful subjects tended to ignore key elements in the text (phrases and words) or spend quite a long time trying to work out unimportant words.

- b) Both the more and the less successful subjects tended to check every new word in the dictionary. One reason may be that they are not trained in using this strategy more efficiently. In addition, it was reported by some interviewees that they prefer to check every new word regardless of its importance in respect of that text, because an unimportant word in a current text might be more important in a later one, especially in an exam where the subjects are not allowed to use dictionaries. Looking up every new word is found to slow down the fluency of reading making it a word-by-word decoding process which results in losing the general argument (Hosenfield, 1977; cited in Scholfield, 1997). Schouten-van Parreren (1989; cited in Gu, 2003) reports that unsuccessful learners tend to focus on problematic vocabulary items and disregard the context.
- c) Gu (1994) reports that good language learners usually skip a new word or postpone dealing with it to a late stage of contextual comprehension if they believe that it is not important for understanding the context, whereas less proficient learners will usually try to learn the meaning of almost every new word and never try to guess their meaning. Gu also reports that low proficiency learners suffer comprehension problems because they usually pick up the main dictionary meaning of a new word regardless of its current context. Ahmed (1989), however, finds that poor learners tend to overlook an unfamiliar item more than good learners who did not use this strategy. Nakamura (2000), however, warns against simple interpretation of Ahmed's results, arguing that the effective use of this strategy depends on the way it is used, whether the skipped word is important for comprehending the context or not. Nakamura reports that the upper level students in his study show no significant increase in using the strategy of skipping compared to second level students. Nakamura suggests that this may be

attributable to L2 learners' assumption that the contextual understanding of a text requires the understanding of every single word in it (Kang and Golden, 1994; cited in Nakamura, 2000).

5.3.6 Global Knowledge

- a) The experiment confirms the usefulness of previously known information in cue utilisation. The subjects' use of global knowledge was more apparent in texts C and D. A few subjects were familiar with the concepts discussed in texts A and B.
- b) It was quite surprising that despite the fact that the subjects are university students majoring in English and translation, the majority of them displayed little global knowledge, if any, in text E, which was on technical translation,.

5.3.7 Time-management

- a) Time-management was a good indicator for the more successful subjects because these covered more parts of the texts and provided more details about their protocols in a reasonable time. Some of the less successful subjects, on the other hand, spent less time on the tasks. This was because they skipped a number of words, phrases and sentences.
- b) Time-management was also a strong indicator when considering the use of the dictionary. The more successful subjects were found to use the dictionary more quickly and more competently than the less successful ones. These used the dictionary more frequently and spent most of the time in trying to manipulate the information given by the dictionary to fit the context in hand.

5.3.8 Planning

- a) The more successful subjects had a more carefully thought-out approach to sequence of strategy use and strategy selection. This is clearly evidenced by their following a stable sequence of strategy use throughout the five texts. For example, they tried to read a whole text or a whole paragraph before addressing new words. Before referring to the dictionary they often tried to make as logical a guess as possible.
- b) Those who dealt with new words in isolation from the immediate or wider context are unlikely to benefit from free reading for the aim of developing their vocabulary knowledge, especially with reference to the polysemous or collocational aspects of new words.
- c) Some subjects who made fairly good use of planning in their reading, nevertheless demonstrated only partial or inaccurate contextual understanding.
- d) Reading a whole text or paragraph before dealing with unknown words was practised by a minority of subjects.
- e) The more successful subjects have an advantage in planning because they are quick readers and efficient users of the dictionary.
- f) Planning for efficient word attack was variable among the subjects. The more successful subjects planned to read beyond sentence level. They read the sentences before and after. Some of them read the whole text before trying to work out new words. The less successful subjects showed that they focus on new words without considering even the surrounding words within the sentence level.

CHAPTER SIX

IMPLICATIONS AND RECOMMENDATIONS

This chapter will offer some pedagogical implications and recommendations for the improvement of vocabulary knowledge and use of VLSs among Saudi EFL learners majoring in English. These implications and recommendations are drawn from the overall findings of the questionnaire and TAPs data. The questionnaire and TAPs data make apparent a number of areas of weaknesses in the subjects' English vocabulary in general and use of VLSs in particular. The discussion of learning and teaching recommendations of using LLSs and VLSs in Chapter Two should also be considered in this respect.

In the first section of this chapter the concept of strategy training is discussed in general terms, with reference to other writers. The second section presents the pedagogical implications for vocabulary strategy training, based on the more specific findings of the current study.

6.1 Strategy Training

L2 teaching methods have recently witnessed a marked shift in focus towards learners' needs. This has resulted in a shift of learning responsibility for both teachers and learners, such that learners have become more self-directed and less dependent on teachers for meeting their individual needs (Cohen, 1998). It is assumed that making L2 learners more responsible and more active participants in the process of learning will make them become more successful learners. Thus, since L2 learners usually learn most new words independently (Graves, 1987; cited in Lawson and Hogben,

1996) and since it is not possible for L2 teachers to predict or teach the entire vocabulary that their students might need (Sternberg, 1987; Nation, 1990), L2 learners should be encouraged to adopt conscious plans to develop their L2 vocabulary on their own and be introduced to and trained in a wide range of VLSs throughout a prolonged programme of courses that reflect a supposedly extended period of vocabulary learning.

Vocabulary learning is a potential area for learners to exercise more responsibility for meeting their individual vocabulary needs. Promoting autonomous vocabulary learning is important, since it gives learners the opportunity, skills and knowledge to find, choose and evaluate the methods that they should follow in order to gain optimum results in their attempts to learn. Unfortunately, despite this shift of responsibility in learning a foreign language (especially at university level) and despite the fact that L2 vocabulary learning is a rewarding area for practising autonomous learning, L2 vocabulary learning is not precisely defined within the modules plan at the Department of English and Translation in Qassim Imam University where the subjects of the current study are studying. More unfortunately, the subjects of the current study must learn English in a typical input-poor EFL (as opposed to ESL) environment in which learners have limited opportunity to use L2 receptively or productively outside or even inside the classroom (Kouraogo, 1993). Given that learners need to learn a large L2 vocabulary, train in a wide range of VLSs, continue to learn L2 vocabulary according to a graded programme, and periodically assess their vocabulary knowledge and strategy use, the aims of L2 vocabulary learning should be clearly determined within a well-structured, long-term strategy training programme.

Strategy training should aim to facilitate L2 learning by making learners more aware of a wide range of possible strategies: the L2 learning curriculum should thus include strategy-based instruction (Green and Oxford, 1995; Cohen, 1998). According to Nation (2001: 219), choosing strategies involves '*choosing the most appropriate strategy from a range of strategies and deciding how to pursue the strategy and when to switch to another strategy*'. This, of course, requires that the learner is fully aware of the prerequisites, advantages and disadvantages of every strategy. The proper application of every strategy requires careful preparation and training. Effective strategy use does not simply involve knowing what strategy to use, but also how to use it effectively (Vogely, 1995; cited in Cohen, 1998). An introductory course in VLSs should be developed with the aim of introducing learners to the basic procedures of using VLSs and raising their awareness of L2 vocabulary learning in terms of size and word knowledge requirements. This introductory course should be followed by a well-staged series of courses assigned to gradually develop the students' L2 vocabulary learning skills and size.

The fact that learners learn L2 vocabulary independently does not lessen the role that teachers can play in the process of learning. Learners need teachers who can provide them with knowledge about L2 vocabulary learning and skills in using strategies. Nation (2001) maintains that autonomous learning is possible even in a strongly teacher-led class. In strategy training for L2 vocabulary learning, learners need knowledgeable teachers because a successful strategy training programme requires them to have sophisticated strategy awareness and skills. Such knowledge and skills are, of course, beyond the abilities of learners. This is quite clear from the discussion of the requirements of a successful strategy training suggested by some

researchers. Cohen (1998: 66), for instant, maintains that strategy training becomes successful if learners are provided with the necessary tools to:

- a) self-diagnose their strength and weaknesses in language learning;
- b) become more aware of what helps them to learn the language they are studying most efficiently;
- c) develop a broad range of problem-solving skills;
- d) experiment with both familiar and unfamiliar learning strategies;
- e) make decisions about how to approach a language task;
- f) monitor and self-evaluate their performance;
- g) transfer successful strategies to new learning contexts.

Similarly, Nation (2001) suggests eight awareness-based principles for promoting learners' knowledge and skills in autonomous learning (cf. 2.2.3.1.9). Cohen's requirements and Nation's eight principles necessarily entail the assistance and instruction from a teacher well-informed about strategy use and strategy training.

A very important factor that teachers and course planners need to take into consideration in a strategy training course is motivation. Learners must be motivated to develop their L2 vocabulary and their use of VLSs. Both learning strategies and motivation to use them are integral parts of the learning process. Dickinson (1995: 174) states that:

It has been shown that there is substantial evidence from cognitive motivational studies that learning success and enhanced motivation is conditional on learners taking responsibility for their own learning, being able to control their own learning and perceiving that their learning successes or failures are to be attributed to their own efforts and strategies rather than factors outside their control.

Similarly, Oxford & Nyikos (1989: 295) argue that there appears to be a mutual relationship between motivation and strategy use. That is, high motivation leads to significant use of LLSs and high strategy use increases motivation. They say:

Based on research findings on skill development and self-esteem, we would expect that use of appropriate strategies leads to enhanced actual and perceived proficiency, which in turn creates high self-esteem, which leads to strong motivation, spiralling to still more use of strategies, great actual and perceived proficiency, high self-esteem, improved motivation and so on'.

The TAP experiment indeed shows that the more proficient subjects were more motivated to learn new words, learn more meanings of the words that they already knew and check some known words that were used in contexts new to them.

It is believed that Saudi English majors who seem to rely heavily on course demand in their use of VLSs will benefit greatly from a strategy training course. They report more use of shallower, exam-related strategies such as studying the pronunciation and spelling of new words, taking vocabulary notes in class, verbal and written repetition and using revision materials (for mid-term and final exams). They also defend their infrequent use of certain strategies on the grounds that they have not been trained in using them. This type of learner is more likely to benefit from strategy training (Sanaoui, 1995): there appears to be a persistent need for a pedagogical focus on VLSs to be incorporated into the curriculum. Long-term learning programmes of L2 vocabulary which is course-dependent will promote Saudi EFL learners' L2 vocabulary knowledge and encourage strategy use. Oxford and Ehrman (1995) found that enhancing academic progress (e.g. achieving course credit) is an instrumental motivation for frequent strategy use.

In order to promote learner motivation, it is necessary in autonomous L2 vocabulary learning to allow learners to choose for themselves the types of strategy that best suit them. Therefore, individual differences need to be taken into consideration. There cannot be a 100 % preferred approach for L2 vocabulary learning, because a number of linguistic and non-linguistic factors can seriously affect the suitability of some VLSs for some learners. A very important component of a strategy training course is the periodic investigation of the factors affecting learning progress and strategy use, at both individual and group levels. There should also be an ongoing investigation of learners' needs according to their proficiency level, their learning style preferences, their personality characteristics, their beliefs and attitudes towards language learning and strategy use, available resources (e.g. time, costs, materials, availability of teacher trainers), students' expectations of their roles and the roles of their teachers in the L2 learning process, reasons for studying the L2 (Cohen, 1998), and learners' age, sex and degree of motivation (Green and Oxford, 1995). Thus, some strategies will be more suitable for some learners than for others.

With this in mind, Cohen (1998) suggests that course designers and teacher trainers need to conduct evaluative research on strategy training programmes in order to assess the effect of training on learners' performance. In the same way, Kudo (1999:31) argues that in order to train learners in autonomous learning of L2 vocabulary, learners should identify the strategies that they actually use so that *'teachers can help them choose and explore strategies that seem suitable to them to be able to learn the target language more effectively, and to self-evaluate and self-direct their learning'*. Horwitz (1999) argues that it is important for effective language instruction to understand learners' beliefs about language learning in order to understand learner approaches to instruction and their degree of satisfaction with it.

Strategy trainers can conduct TAP experiments and questionnaire surveys in order to assess learners' vocabulary knowledge as well as their use and evaluation of VLSs strategies.

A strategy training programme should consider Nation's (2001) argument that we should think of autonomous learning as relying on three factors: 1) attitude, 2) awareness and 3) capability (cf. 2.2.3.1.9). The overall findings of the current study suggest that there is a mutual relationship between these three factors. Learner attitudes are fundamental because they control the other two factors. Negative attitudes towards autonomous learning and strategy use will decrease learners' motivation to increase their strategy awareness and vice versa. Lack of metacognitive knowledge about language learning may produce the reverse effect on learner training programmes which aim to promote learner autonomy: a learner may develop negative attitudes towards autonomous learning and its requirements (Victori and Lockhart, 1995). Similarly, lack of positive attitudes and strategy awareness will make learners incapable of exercising autonomous learning. A learner who has metacognitive knowledge is able to develop a self-directed approach, which requires determining needs, goals, selecting useful material and evaluating progress over time (Victori and Lockhart, 1995). Nation's 'capability' refers to the knowledge and skills required to be an autonomous learner. Such knowledge and skills involve the eight principles discussed in Chapter Two (cf. 2.2.3.1.9, pp. 94-ff).

In this regard, the current study reveals two significant findings. First, the subjects are unaware of several strategies and of the effectiveness of a number of strategies. Second, subjects' overall rating of the strategies is significantly higher than that of their reported use. Some strategies achieved relatively lower rating indexes mainly because a considerable number of respondents chose not to evaluate them (i.e.

they chose 'I don't know'). More significantly, the respondents positively evaluate some strategies that they do not frequently use or do not know (e.g. published graded readers, monolingual dictionaries). Therefore, a strategy training programme should aim to promote learners' metacognitive awareness in order to make them able to choose the most effective strategies that fulfil their L2 vocabulary needs and allow them to monitor their progress. It can be assumed that introducing the subjects to and training them in using these strategies will yield positive results in terms of their perception, and as a result, of their strategy use, as they become more knowledgeable about the advantages of the VLSs that they already use and those that they are not aware of (Schmitt, 1997). This assumption finds support in the subjects' great interest in tests of vocabulary levels (cf. Nation, 2001, appendices 1-4) after the researcher distributed a sample of such tests, despite the fact that their initial evaluation of such testing was quite low.

6.2 Vocabulary Strategy Training

A number of pedagogical implications can be drawn from the questionnaire and TAPs data findings of the current study with regard to the subjects' use of metacognitive, discovery and consolidation strategies:

1. Despite the fact that free reading was the fourth most frequent metacognitive strategy, the strategies of graded and controlled reading scored low frequency indexes. The three strategies, however, were rated within the five most useful strategies. The high evaluation of reading strategies suggests that the subjects strongly believe in reading as a useful source for developing L2 vocabulary. This finding should be exploited through implementing a well-staged reading programme that, by building up a sufficient vocabulary store and developing

guessing skills, aims to take L2 learners gradually through graded and controlled reading, and by training in using effective strategies of learning L2 vocabulary from context to facilitate free reading.

2. We have seen that the strategies that require long-term dedication such as planning revision, continuing to learn L2 vocabulary and evaluating L2 vocabulary knowledge, as well as the long-term note-taking strategies, achieve low frequency indexes. This may suggest that lack of knowledge, lack of training, lack of motivation, and lack of time are strong constraints against strategy use. These constraints thus need to be considered in a strategy training programme. Training learners in these strategies requires in the first place raising their awareness of the nature of L2 vocabulary learning in terms of learner needs, gradual stages of learning, and learning requirements (cf. 2.2.1.1 and 2.2.1.2). It is also necessary for teachers to make learners aware of effective planning and continuous evaluation of their vocabulary knowledge. In terms of time required, a L2 vocabulary learning programme should reflect the long-term learning process that L2 learners unquestionably need to undergo in order to steadily improve their L2 vocabulary.
3. Questionnaire and TAPs data show that Saudi EFL learners' use and evaluation of the strategy of ignoring some new words is relatively low. In fact, in the TAP experiment, the vast majority of subjects tended to check every new word in the dictionary, regardless of its importance for understanding the context. This indicates that they need to improve their awareness of the significance of this strategy, especially at the advanced stages of reading where learners are required to read extensively and, at the same time, are not supposed to learn every new word explicitly. It may be assumed that training learners in building up sufficient

vocabulary stores will increase their confidence in taking correct decisions about when to check or ignore a new word. This is because they will encounter fewer new words and subsequently will better comprehend the main ideas of written texts. As a result they will be able to use the strategy of ignoring some (unimportant) new words more effectively.

4. Though watching TV is the most frequently used metacognitive strategy, other media strategies (i.e. listening to the radio, reading newspapers, and surfing the internet) achieve considerably lower frequency indexes. This, however, contrasts with the subjects' high evaluation of media strategies. Their high evaluation suggests that a strategy training programme should exploit media sources for the advanced stages of vocabulary learning, for both controlled and free reading as well as listening.
5. The questionnaire and interview data reveal that Saudi EFL learners do not use social strategies frequently for three reasons. First, the learning environment within the university allows little teacher-student or student-student contact, due to busy schedules on both sides and the nature of the classroom teaching methods (i.e. little pair or group work). Second, staff-members and students view vocabulary learning as a separate aspect of L2 learning which chiefly depends on intensive use of L2 in general and consulting a dictionary in particular. Third, Saudi EFL learners have little opportunity to interact with native speakers either inside or outside the university. A strategy training programme can improve the learners' use of social strategies. Oxford (1994) suggests that teachers should help learners develop both affective and social strategies according to their individual learning styles, current strategy use, specific learning goals and learning environment. Learners should have time and opportunity to interact amongst

themselves inside and outside the class. They should be provided with consultation sessions on VLSs by knowledgeable staff-members. An important issue that also needs to be considered by the university officials is having English native speaking staff-members to teach modules of general skills at the beginning levels. This will allow the students to increase the chances of interacting with native speakers inside the university. Extracurricular activities regulated by English native speaking staff-members will also be useful.

6. The TAP experiment indicates that a considerable number of subjects need to increase their vocabulary stores in order to be able to learn and deal with new words in context. In this regard, a vocabulary learning programme should consider the fact that learners have different vocabulary needs. Thus, it is necessary to determine the vocabulary level of each student and recommend the level of vocabulary that he/she needs accordingly. Nation's (2001) four types of assessment may prove useful in this respect (see appendix twelve). Leake and Shaw (2000) maintain that autonomous L2 vocabulary learning must include the learner's ability to select the type of word that a learner will need according to a realistic assessment of the purpose of learning. Similarly, Sannaoui (1995) points out that L2 learners need to build up a large stock of L2 vocabulary in order to become proficient in L2 and they should be helped to become autonomous in managing the process of building, expanding and refining their L2 vocabulary. It can be argued that guessing words from context does not work effectively unless the 3,000 most frequent words are learnt (Nation and Waring, 1997). Thus, it is important for a L2 learning programme to help learners cross the threshold after which they can learn L2 words from context. The TAPs data supports this argument in different ways. First, the more proficient subjects who display a

reasonable vocabulary store are more capable of using the context to deal with unfamiliar words and unfamiliar meanings of polysemous words. In contrast, the less proficient subjects tend to apply the most frequent meaning of polysemous words and consequently misinterpret the context. Second, the more proficient subjects show good grasp of the overall textual coherence because they encounter fewer new words than the less proficient subjects do. That is, the latter ignore the overall coherence of the text because their attention is distracted from the wider context through focusing on individual words. Third, there are a number of cases where the lower proficiency learners confuse new words with known ones. Fourth, despite the fact that some subjects use a number of WSSs in their TAPs, their low proficiency level in general and their low vocabulary knowledge in particular prevent them from understanding the text or dealing with new words successfully. Fifth, the less proficient subjects lack a critical attitude towards their comprehension. They tend not to revise their understanding despite the fact that their interpretation of the text lacks coherence and that their misunderstanding mounts up throughout the text.

7. Effective use of discovery strategies is an essential introductory step towards effective vocabulary learning and use. However, the TAPs data show that a considerable number of subjects are incompetent in using the dictionary or guessing new words. The main performance errors in dictionary use are incorrect selection of suitable meaning according to available context, disregarding pronunciation, not reading example sentences, not reading all word meanings, and regarding the dictionary as a final authority to the extent that it is allowed to control the text. With regard to guessing the meaning of new words, despite the fact that some subjects report that they are trained in using guessing strategies,

TAPs data also reveal that the strategy of guessing is rarely used and that the vast majority of guesses are not successful. These findings can be attributed to lack of training and low proficiency levels. As for using the dictionary, an incompetent learner will have difficulty in mutually manipulating both the text and the dictionary information in order to successfully deal with new words. Successful use of guessing strategies is possible only on the basis of a good proficiency level at which new words and problematic syntactical structures are kept to a minimum. Therefore, proficiency level should be an important criterion for training learners in using the dictionary and using guessing strategies.

8. In spite of the limitations of bilingual and electronic dictionaries on one hand, and on the other, the subjects' strong criticism of such dictionaries and their positive evaluation of monolingual dictionaries (as the most useful discovery strategy), they report far more use of bilingual and electronic dictionaries. Their criticism of monolingual dictionaries focuses mainly on encountering more unknown words in the definitions and the fact that they take more time to read. This may suggest two implications. First, monolingual dictionaries require a higher L2 proficiency level than that which the majority of the subjects demonstrate in their TAPs (Scholfield, 1997). Second, the subjects lack experience in using monolingual dictionaries. In particular, they seem not to have been introduced to some recent monolingual dictionaries which use controlled defining vocabulary and provide useful information on word frequency, collocation, register and authentic example sentences. Their comments in the questionnaire survey and in the individual interviews as well as in the class discussions reveal that most of them are not aware of such dictionaries.

9. Direct learning from the dictionary is the third most frequent metacognitive strategy. But the fact that Saudi EFL learners tend to use bilingual dictionaries more frequently emphasises their need to train in using monolingual dictionaries, given that that monolingual dictionaries are usually far more useful.
10. A major finding in the current study is that Saudi EFL learners tend to frequently use short-term consolidation strategies. This type of strategy also achieves high rating indexes. In contrast, long-term consolidation strategies that can be used as means of keeping vocabulary records achieve low frequency and rating indexes. These strategies include designing a word list, designing flash cards, using scales for gradable adjectives, using semantic maps, using semantic feature grids, and repeated listening to tape-recorded materials. A strategy training programme should aim to increase learners' awareness and use of long-term as well as short-term consolidation strategies.
11. Overall, the questionnaire data showed that lack of opportunity and necessary materials leads to infrequent use of some strategies. Examples of such strategies included using graded readers, using English media sources (TV, radio, newspapers, internet), using computer programmes, group work, seeking teachers' assistance, seeking classmates' assistance, and using tape-recorded material. Therefore, learners should be provided with the necessary materials and conditions for practising such strategies. In this respect, a well-stocked open access centre would be invaluable.

CHAPTER SEVEN

CONCLUSION

7.1 Summary of Chapters

Chapter Two opens with a discussion of different aspects of LLSs considered to be relevant to VLSs, in order to provide a theoretical background to the main purpose of the chapter, namely to select out a taxonomy of VLSs for the current study. Relevant aspects include some definitions of LLSs, characteristics of factors affecting strategy use, and the taxonomies of LLSs suggested by some researchers.

This discussion is followed by outlining the issues considered to be important aspects of the process of L2 vocabulary learning. First, explicit and implicit learning of L2 vocabulary is discussed on the basis that VLSs are gradually applicable under these main classifications. It is suggested that the beginning and intermediate stages of vocabulary learning should involve more explicit activities, whereas the advanced stages should be directed towards using more context-based strategies. Second, a number of facts concerning L2 vocabulary size, native speakers' own vocabulary store, and vocabulary needed by L2 learners are highlighted on the basis that vocabulary learning strategy awareness should involve at least some knowledge of these issues. Such knowledge should play a major role in allowing learners to decide when to reduce their use of the more explicit strategies for building a sufficient vocabulary store, and when to increase their use of the more implicit strategies of learning words in context. Third, the multi-purpose requirements of word knowledge are discussed on the grounds that learners should be aware of these requirements and that such requirements call for the use of a wide range of explicit and implicit strategies.

Following the discussion of these three aspects, two important taxonomies are discussed with the purpose of establishing the form of the taxonomy of the current study. These are Schmitt (1997) and Nation's (2001) taxonomies of VLSs. Finally, the taxonomy of the current study is described, comprising three categories of VLSs: 1) metacognitive, 2) discovery, and 3) consolidation strategies. The metacognitive strategies involve: building up a sufficient vocabulary store, studying the English affixation system, maximising exposure to English media, learning vocabulary through reading, planning vocabulary revision and learning progress, monitoring progress, learning about VLSs and about the nature of L2 vocabulary learning, and interacting with other people in order to improve L2 vocabulary. The discovery strategies involve using dictionaries, contextual guessing, analysing word units, and using social strategies. The consolidation strategies comprise a wider range of memory and cognitive strategies.

Chapter Three presents the three methods used for collecting the data of the study. Three instruments are described: 1) a questionnaire survey, 2) a think-aloud protocol experiment, and 3) individual interviews. The chapter gives rationale for using each method and describes how the data relating to each method has been collected and analysed.

Chapter Four deals with the analysis of the questionnaire data. This provides information regarding the subjects' use and evaluation of the VLSs in the taxonomy of the current study discussed in Chapter Two. The results show that the use of the three types of VLSs by Saudi EFL learners majoring in English is rather weak. Their evaluation of the strategies, however, is significantly higher than their reported use. The analyses of the questionnaire data show that the infrequent use of some strategies is mostly related to four main factors. These are 1) lack of awareness, 2) lack of training, 3) lack of opportunity, and 4) lack of motivation. It is also seen that frequency of strategy use is influenced by course requirements.

The analysis of the subjects' overall performance in the TAP experiment is presented in Chapter Five. The chapter also sets out to analyse the TAPs of nine representative sample subjects of five groups classified according to a given performance criteria. The TAPs analyses show that a considerable number of the subjects demonstrate poor vocabulary competence as well as poor use of discovery strategies. It is apparent from the subjects' performance in the TAP experiment that there is a correlation between overall proficiency level and successful strategy use.

Chapter Six outlines a number of pedagogical recommendations according to the major findings of the study. Because the subjects report a far greater use of course-based strategies and evaluate the majority of the strategies quite positively, it is suggested that the subjects can benefit from a programme of courses that aim to promote their awareness of the nature of learning L2 vocabulary, introduce them to a wide range of VLSs, and train them in how to use the strategies effectively.

7.2 Overall Contribution of the Thesis

The current study attempted to contribute to the current research on VLSs in three ways. First, the taxonomy of VLSs used in the current study is an innovative modified taxonomy of VLSs which is based on the major previous studies on LLSs and VLSs. It is innovative in that it manifested the role of metacognitive strategies in the process of learning L2 vocabulary. In particular, the taxonomy consolidates the role of some strategies that are relatively briefly referred to in the literature. These strategies include building up a sufficient vocabulary store, learning vocabulary through graded, controlled and free reading, and learning about VLSs and about the nature of L2 vocabulary learning.

Second, the use of three research methods (i.e. questionnaire survey, TAPs and interviews) in a complementary way provided a clearer picture of the subjects' use of and

attitudes towards VLSs. The analyses of the questionnaire, TAPs and interview data complemented each other as follows:

1. The questionnaire enabled us to investigate the subjects' use of and attitudes towards the three types of VLSs: metacognitive, discovery and consolidation strategies. The TAP experiment allowed us to probe in greater detail the subjects' use of discovery strategies (e.g. dictionary use, guessing, skipping). Finally, the interview data is used in the current study to complement the analysis of the questionnaire and TAP data in terms of investigating the reasons behind frequent or infrequent use of some strategies.
2. The use of TAPs also allowed us to explore the subjects' overall proficiency level in terms of L2 vocabulary knowledge. In fact, the analysis of the TAP data confirmed the infrequent use of a number of metacognitive strategies in the questionnaire data. The reported infrequent use of the strategies of building up a sufficient vocabulary store in the questionnaire data, for example, is reflected in the analyses of the subjects' TAPs in that a considerable number of subjects demonstrated a low level of vocabulary store. The low proficiency level of several subjects in the TAP data also confirms the questionnaire data that reports low frequencies of the strategies of maximising exposure to English media, learning vocabulary through graded, controlled or free reading, using skipping strategies, planning vocabulary revision, evaluating vocabulary knowledge, and continuing to learn vocabulary over time.
3. The analyses of the subjects' TAPs confirmed the subjects' reported frequent use of bilingual dictionaries and electronic dictionaries in the questionnaire data. They also confirmed the infrequent use of monolingual dictionaries.
4. The TAP data, however, contradicts the questionnaire data with regard to the subjects' use of guessing strategies. The subjects' reported use of guessing strategies

in the questionnaire data is quite high (69 points). The TAP data clearly show that the use of guessing strategies is rather rare.

Third, the current study is also innovative in terms of its subjects. To the best of our knowledge, there is no previous empirical study on the use of a comprehensive set of VLSs by Saudi (or Arab) EFL learners majoring in English. The study results revealed a number of special characteristics of Saudi English majors' use and evaluation of a comprehensive set of VLSs according to certain features in their learning environment inside and outside their university in Qassim, Saudi Arabia. The study also highlighted its subjects' (Saudi EFL learners majoring in English) desperate need to build up and improve their English vocabulary in a systematic way. They need to train in using the vast majority of VLSs, especially the ones that take advantage of recent computer lexical corpora such as graded readers and recent monolingual dictionaries as well as guessing and skipping strategies. At the academic level, the recommendations of the study were positively endorsed by the Department of English and Translation in Qassim Imam University. The department is studying the minutes of a five-course plan suggested by the researcher to help its students build up and improve their English vocabulary throughout the first five semesters.

7.3 Limitations of the study

It is hoped that the current study has presented some valuable information on the use and evaluation of VLSs by Saudi EFL learners majoring in English, and that it has accordingly provided effective pedagogical recommendations. However, the findings and pedagogical recommendations presented in the current study should not be generalised without the following research limitations being taken into consideration:

1. As its basis, the current study required a comprehensive taxonomy to be drawn up with the benefit of recent research into VLSs and L2 vocabulary learning. It was

also necessary to compare this study's results with similar studies. It goes without saying that research into comprehensive sets of VLSs is scarce and directed towards different aims and objectives.

2. The study's research methods also suffered some limitations. The researcher found the three methods used in the current study the best available ways to probe in greater detail the subjects' use and evaluation of VLSs. These limitations, however, have been taken into consideration when interpreting the results of the data collected.
3. The nature of the study, the small number of Saudi EFL learners majoring in English, and the criteria selected for the sample restricted the available number of subjects to 50. However, even the relatively small number of our subjects has allowed us to achieve some findings and pedagogical recommendations comparable with previous studies.
4. The questionnaire data is based on self-report and thus cannot preclude overestimated or underestimated reported strategy use or even a pretended use.
5. In Segler (2001: 31) words, '[a]caveat to bear in mind is some strategies could be classified under several headings, so some extent of arbitrariness in the classification scheme could not be completely avoided.' The classification of the strategies investigated in the current study is subjective and thus, no doubt, subject to be debated. This fact is luckily admitted by a number of other researchers (e.g. Oxford, 1990; Schmitt, 1997).

7.4 Suggestions for future research

In considering the current study's research methods, analyses and findings, a number of further areas of research into strategy use for L2 vocabulary learning suggest themselves. These include:

1. The current study confines itself to the context of the Qassim region in general and Qassim Imam University in particular. Similar studies need be conducted within the context of other Saudi cities and universities in order to compare their results and findings to those of the current study.
2. The combined use of a questionnaire survey, TAP experiment and individual interviews is found to have provided valid and reliable results. However, further research is needed to confirm their validity and reliability.
3. The recommendations provided in Chapter Six are based on the outcomes of the current study. These recommendations need to be assessed against generally similar learning contexts, especially the effect of training on strategy use and on proficiency level.
4. Gender-based research into LLSs suggests that female learners use a far wider range of strategies and that female and male learners use different strategies (Catalán, 2003). The current study being conducted with male Saudi learners, it is suggested that a similar investigation be carried out with female Saudi learners majoring in English.
5. For the purpose of this study, the VLSs investigated are assumed to be a comprehensive set. However, a number of these strategies seem to invite more detailed investigation of their effective use, factors affecting their use and their effect on learning outcomes. Examples of such strategies may include building a sufficient vocabulary store, using media sources, using the three types of reading sources, using monolingual dictionaries, and the various note-taking strategies.

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Appendix One

Naiman et al.'s (1978) taxonomy of LLSs

Naiman et al. (1978)	Active task approach	Responds positively to learning opportunity or seeks and exploits learning environments	Student acknowledges need for a structured learning environment and takes a course prior to immersing him/herself in target language
		Adds related language learning activities to regular classroom program	Reads additional items
		Practices	Listens to tapes
	Realization of language as a system	Analyzes individual problems	Writes down words to memorize
		Makes L1/L2 comparisons	Looks at speakers' mouth and repeats
		Analyzes target language to make inferences	Reads alone to hear sounds
Realization of language as a means of communication and interaction		Makes use of fact that language is a system	Uses cognates
		Emphasizes fluency over accuracy	Using what is already known
		Seeks communicative situations with L2 speakers	Uses rules to generate possibilities
Management of affective demands		Finds sociocultural meanings	Relates new dictionary words to others in same category
		Copes with affective demands in learning	Does not hesitate to speak
Monitoring L2 performance		Constantly revises L2 system by testing inferences and asking L2 native speakers for feedback	Uses circumlocutions
			Communicates whenever possible
			Establishes close personal contact with L2 native speakers
			Writes to pen pals
			Memorizes courtesies and phrases
			Overcomes inhibition to speak
			Is able to laugh at own mistakes
			Is prepared for difficulties
			Generates sentences and looks for reactions
			Looks for ways to improve so as not to repeat mistakes

Appendix Two

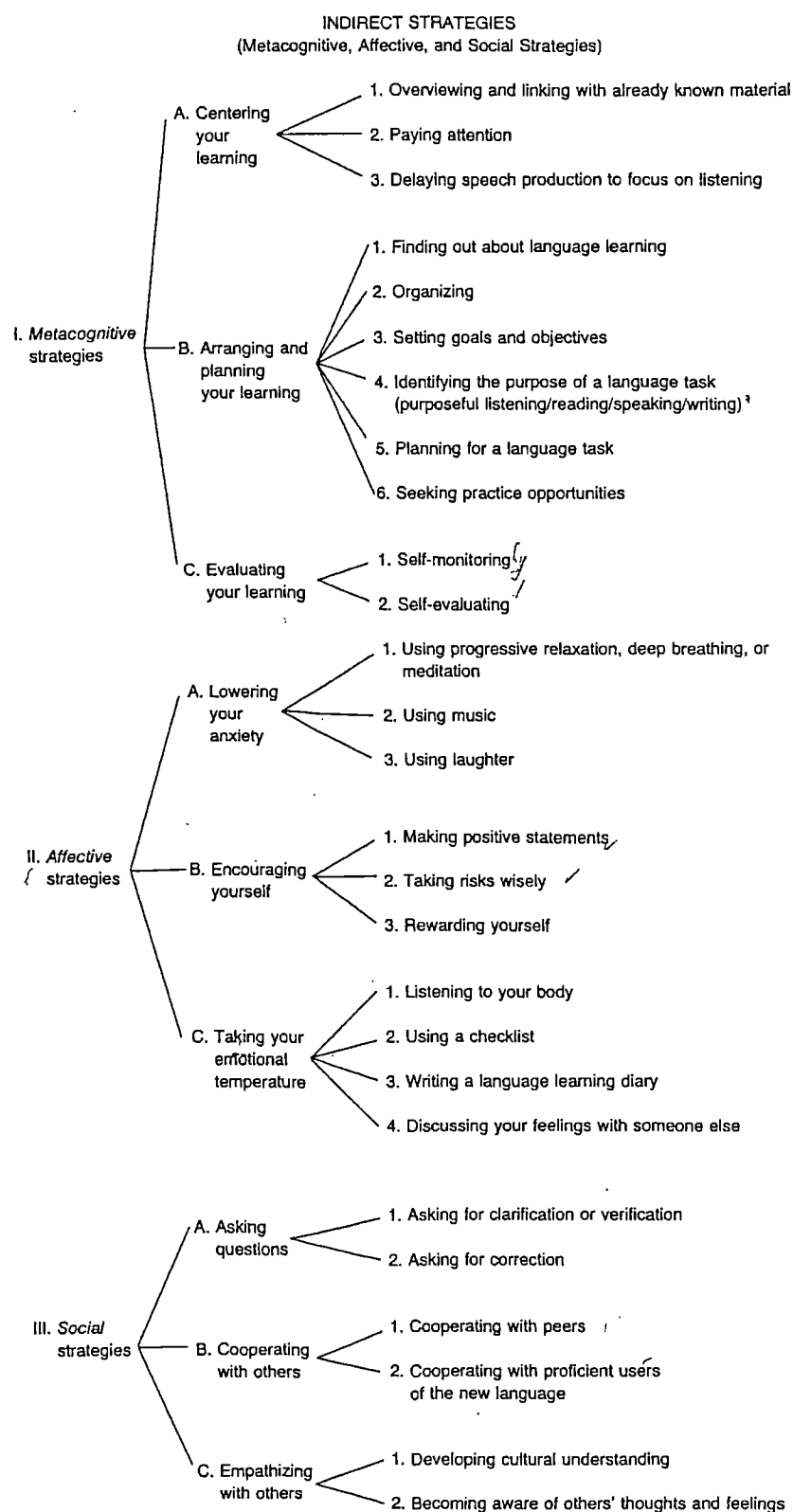
Rubin's (1981) taxonomy of LLSs

1.1. CLASSIFICATIONS OF LEARNING STRATEGIES IN SECOND LANGUAGE ACQUISITION

<i>Primary strategy classification</i>	<i>Representative secondary strategies</i>	<i>Representative examples</i>
Strategies that directly affect learning	Clarification/verification	Asks for an example of how to use a word or expression, repeats words to confirm understanding
	Monitoring	Corrects errors in own/other's pronunciation, vocabulary, spelling, grammar, style
	Memorization	Takes note of new items, pronounces out loud, finds a mnemonic, writes items repeatedly
	Guessing/inductive inferencing	Guesses meaning from key words, structures, pictures, context, etc.
	Deductive reasoning	Compares native/other language to target language
	Practice	Groups words Looks for rules of co-occurrence Experiments with new sounds Repeats sentences until pronounced easily
Processes that contribute indirectly to learning	Creates opportunities for practice	Listens carefully and tries to imitate Creates situation with native speaker Initiates conversation with fellow students Spends time in language lab, listening to TV, etc.
	Production tricks	Uses circumlocutions, synonyms, or cognates Uses formulaic interaction Contextualizes to clarify meaning

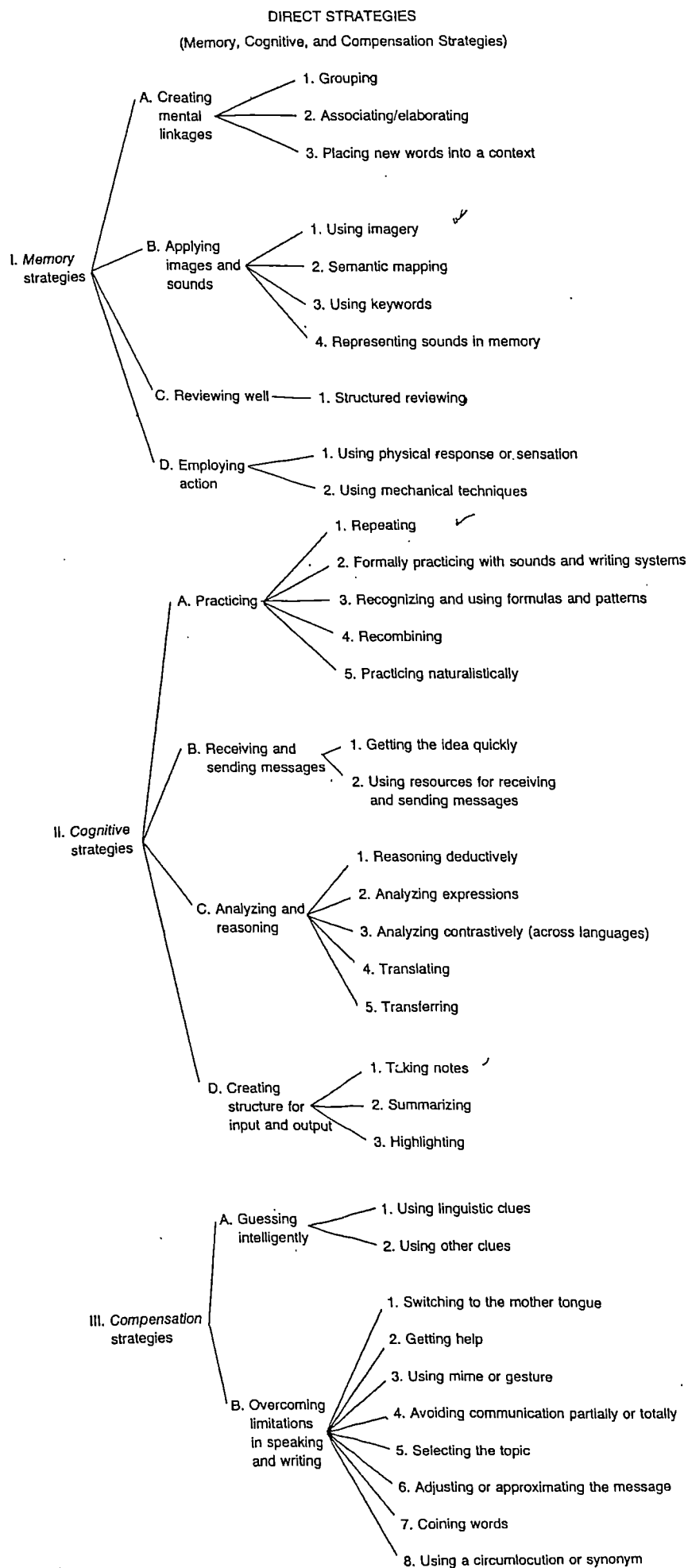
Appendix Three

Oxford's (1990: 16-21) taxonomy of LLSs



continued

Appendix Three, continued



Appendix Four

O'Malley *et al.*'s (1985) taxonomy of LLSs used by ESL learners

ESL DESCRIPTIVE STUDY: LEARNING STRATEGY DEFINITIONS AND CLASSIFICATIONS

<i>Learning strategy</i>	<i>Definition</i>
A. Metacognitive Strategies	
<i>Planning</i>	
Advance organizers	Previewing the main ideas and concepts of the material to be learned, often by skimming the text for the organizing principle.
Directed attention	Deciding in advance to attend in general to a learning task and to ignore irrelevant distractors.
Functional planning	Planning for and rehearsing linguistic components necessary to carry out an upcoming language task.
Selective attention	Deciding in advance to attend to specific aspects of input, often by scanning for key words, concepts, and/or linguistic markers.
Self-management	Understanding the conditions that help one learn and arranging for the presence of those conditions.
<i>Monitoring</i>	
Self-monitoring	Checking one's comprehension during listening or reading or checking the accuracy and/or appropriateness of one's oral or written production while it is taking place.
<i>Evaluation</i>	
Self-evaluation	Checking the outcomes of one's own language learning against a standard after it has been completed.
B. Cognitive Strategies	
Resourcing	Using target language reference materials such as dictionaries, encyclopedias, or textbooks.
Repetition	Imitating a language model, including overt practice and silent rehearsal.
Grouping	Classifying words, terminology, or concepts according to their attributes or meaning.
Deduction	Applying rules to understand or produce the second language or making up rules based on language analysis.
Imagery	Using visual images (either mental or actual) to understand or remember new information.
Auditory representation	Planning back in one's mind the sound of a word, phrase, or longer language sequence.

Appendix Four, continued

(continued)

<i>Learning strategy</i>	<i>Definition</i>
Keyword method	Remembering a new word in the second language by: (1) identifying a familiar word in the first language that sounds like or otherwise resembles the new word, and (2) generating easily recalled images of some relationship with the first language homonym and the new word in the second language.
Elaboration	Relating new information to prior knowledge, relating different parts of new information to each other, or making meaningful personal associations with the new information.
Transfer	Using previous linguistic knowledge or prior skills to assist comprehension or production.
Inferencing	Using available information to guess meanings of new items, predict outcomes, or fill in missing information.
Note taking	Writing down key words or concepts in abbreviated verbal, graphic, or numerical form while listening or reading.
Summarizing	Making a mental, oral, or written summary of new information gained through listening or reading.
Recombination	Constructing a meaningful sentence or larger language sequence by combining known elements in a new way.
Translation	Using the first language as a base for understanding and/or producing the second language.
C. Social Mediation	
Question for clarification	Eliciting from a teacher or peer additional explanations, rephrasing, examples, or verification.
Cooperation	Working together with one or more peers to solve a problem, pool information, check a learning task, model a language activity, or get feedback on oral or written performance.

Source: from O'Malley and Chamot (1990:119)

Appendix Five

Chamot *et al.*'s (1987) taxonomy of LLSs used by FL learners in a descriptive study

FOREIGN LANGUAGE DESCRIPTIVE STUDY: LEARNING STRATEGY DEFINITIONS AND CLASSIFICATIONS	
<i>Learning strategy</i>	<i>Definition</i>
A. Metacognitive Strategies	
<i>Planning</i>	
Organizational planning	Planning the parts, sequence, main ideas, or language functions to be expressed orally or in writing.
Delayed production	Consciously deciding to postpone speaking to learn initially through listening comprehension.
B. Cognitive Strategies	
Rehearsal	Rehearsing the language needed, with attention to meaning, for an oral or written task.
Translation	Using the first language as a base for understanding and/or producing the second language.
Note taking	Writing down key words and concepts in abbreviated verbal, graphic, or numerical form during a listening or reading activity.
Substitution	Using a replacement target language word or phrase when the intended word or phrase is not available.
Contextualization	Assisting comprehension or recall by placing a word or phrase in a meaningful language sequence or situational context.
C. Social/Affective Strategies	
Self-talk	Reducing anxiety by using mental techniques that make one feel competent to do the learning task.

Source: from O'Malley and Chamot (1990:126)

Appendix Six

Chamot *et al.*'s (1988a, b) taxonomy of LLSs used by FL learners in a longitudinal study

FOREIGN LANGUAGE LONGITUDINAL STUDY: LEARNING STRATEGIES AND THEIR DEFINITIONS

Metacognitive strategies involve thinking about the learning process, planning for learning, monitoring the learning task, and evaluating how well one has learned.

1. *Planning*: Previewing the organizing concept or principle of an anticipated learning task (*advance organization*); proposing strategies for handling an upcoming task; generating a plan for the parts, sequence, main ideas, or language functions to be used in handling a task (*organizational planning*).
2. *Directed attention*: Deciding in advance to attend in general to a learning task and to ignore irrelevant distractors; maintaining attention during task execution.
3. *Selective attention*: Deciding in advance to attend to specific aspects of language input or situational details that assist in performance of a task; attending to specific aspects of language input during task execution.
4. *Self-management*: Understanding the conditions that help one successfully accomplish language tasks and arranging for the presence of those conditions; controlling one's language performance to maximize use of what is already known.
5. *Self-monitoring*: Checking, verifying, or correcting one's comprehension or performance in the course of a language task. This has been coded in the think-alouds in the following ways:
 - a. *Comprehension* monitoring: checking, verifying, or correcting one's understanding.
 - b. *Production* monitoring: checking, verifying, or correcting one's language production.
 - c. *Auditory* monitoring: using one's "ear" for the language (how something sounds) to make decisions.
 - d. *Visual* monitoring: using one's "eye" for the language (how something looks) to make decisions.
 - e. *Style* monitoring: checking, verifying, or correcting based upon an internal stylistic register.
 - f. *Strategy* monitoring: tracking use of how well a strategy is working.
 - g. *Plan* monitoring: tracking how well a plan is working.
 - h. *Double-check* monitoring: tracking, across the task, previously undertaken acts or possibilities considered.
6. *Problem identification*: Explicitly identifying the central point needing resolution in a task or identifying an aspect of the task that hinders its successful completion.
7. *Self-evaluation*: Checking the outcomes of one's own language performance against an internal measure of completeness and accuracy; checking one's language repertoire, strategy use, or ability to perform the task at hand. This has been coded in the think-alouds as:
 - a. *Production* evaluation: checking one's work when the task is finished.
 - b. *Performance* evaluation: judging one's overall execution of the task.
 - c. *Ability* evaluation: judging one's ability to perform the task.
 - d. *Strategy* evaluation: judging one's strategy use when the task is completed.

Appendix Six, continued

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- e. *Language repertoire evaluation*: judging how much one knows of the L2, at the word, phrase, sentence, or concept level.

Cognitive strategies involve interacting with the material to be learned, manipulating the material mentally or physically, or applying a specific technique to a learning task.

1. *Repetition*: Repeating a chunk of language (a word or phrase) in the course of performing a language task.
2. *Resourcing*: Using available reference sources of information about the target language, including dictionaries, textbooks, and prior work.
3. *Grouping*: Ordering, classifying, or labeling material used in a language task based on common attributes; recalling information based on grouping previously done.
4. *Note taking*: Writing down key words and concepts in abbreviated verbal, graphic, or numerical form to assist performance of a language task.
5. *Deduction/Induction*: Consciously applying learned or self-developed rules to produce or understand the target language.
6. *Substitution*: Selecting alternative approaches, revised plans, or different words or phrases to accomplish a language task.
7. *Elaboration*: Relating new information to prior knowledge; relating different parts of new information to each other; making meaningful personal associations to information presented. This has been coded in the think-aloud data in the following ways:
 - a. *Personal elaboration*: Making judgments about or reacting personally to the material presented.
 - b. *World elaboration*: Using knowledge gained from experience in the world.
 - c. *Academic elaboration*: Using knowledge gained in academic situations.
 - d. *Between parts elaboration*: Relating parts of the task to each other.
 - e. *Questioning elaboration*: Using a combination of questions and world knowledge to brainstorm logical solutions to a task.
 - f. *Self-evaluative elaboration*: Judging self in relation to materials.
 - g. *Creative elaboration*: Making up a story line, or adopting a clever perspective.
 - h. *Imagery*: Using mental or actual pictures or visuals to represent information; coded as a separate category, but viewed as a form of elaboration.
8. *Summarization*: Making a mental or written summary of language and information presented in a task.
9. *Translation*: Rendering ideas from one language to another in a relatively verbatim manner.
10. *Transfer*: Using previously acquired linguistic knowledge to facilitate a language task.
11. *Inferencing*: Using available information to guess the meanings or usage of unfamiliar language items associated with a language task, to predict outcomes, or to fill in missing information.

Social and affective strategies involve interacting with another person to assist learning or using affective control to assist a learning task.

1. *Questioning for clarification*: Asking for explanation, verification, rephrasing, or examples about the material; asking for clarification or verification about the task; posing questions to the self.
 2. *Cooperation*: Working together with peers to solve a problem, pool information, check a learning task, model a language activity, or get feedback on oral or written performance.
 3. *Self-talk*: Reducing anxiety by using mental techniques that make one feel competent to do the learning task.
 4. *Self-reinforcement*: Providing personal motivation by arranging rewards for oneself when a language learning activity has been successfully completed.
-

Appendix Seven

Schmitt's (1997) taxonomy of VLSs

Strategy Group	Use %	Helpful %
<i>Strategies for the discovery of a new word's meaning</i>		
DET Analyse part of speech	32	75
DET Analyse affixes and roots	15	69
DET Check for L1 cognate	11	40
DET Analyse any available pictures or gestures	47	84
DET Guess from textual context	74	73
DET Bilingual dictionary	85	95
DET Monolingual dictionary	35	77
DET Word lists	-	-
DET Flash cards	-	-
SOC Ask teacher for an L1 translation	45	61
SOC Ask teacher for paraphrase or synonym of new word	42	86
SOC Ask teacher for a sentence including the new word	24	78
SOC Ask classmates for meaning	73	65
SOC Discover new meaning through group work activity	35	65
<i>Strategies for consolidating a word once it has been encountered</i>		
SOC Study and practise meaning in a group	30	51
SOC Teacher checks students' flash cards or word lists for accuracy	3	39
SOC Interact with native-speakers	-	-
MEM Study word with a pictorial representation of its meaning	-	-
MEM Image word's meaning	50	38
MEM Connect word to a personal experience	37	62
MEM Associate the word with its coordinates	13	54
MEM Connect the word to its synonyms and antonyms	41	88
MEM Use semantic maps	9	47
MEM Use 'scales' for gradable adjectives	16	62
MEM Peg Method	-	-
MEM Loci Method	-	-
MEM Group words together to study them	-	-
MEM Group words together spatially on a page	-	-
MEM Use new word in sentences	18	82
MEM Group words together within a storyline	-	-
MEM Study the spelling of a word	74	87
MEM Study the sound of a word	60	81
MEM Say new word aloud when studying	69	91
MEM Image word form	32	22
MEM Underline initial letter of the word	-	-
MEM Configuration	-	-
MEM Use Keyword Method	13	31
MEM Affixes and roots (remembering)	14	61
MEM Part of speech (remembering)	30	73
MEM Paraphrase the word's meaning	40	77
MEM Use cognates in study	10	34
MEM Learn the words of an idiom together	48	77
MEM Use physical action when learning a word	13	49
MEM Use semantic feature grids	-	-
COG Verbal repetition	76	84
COG Written repetition	76	91
COG Word lists	54	67
COG Flash cards	25	65
COG Take notes in class	64	84
COG Use the vocabulary section in your textbook	48	76
COG Listen to tape of word lists	-	-
COG Put English labels on physical objects	-	-
COG Keep a vocabulary notebook	-	-
MET Use English-language media (songs, movies, newscasts, etc.)	-	-
MET Testing oneself with word tests	-	-
MET Use spaced word practice	-	-
MET Skip or pass new word	41	16
MET Continue to study word over time	45	87

- = Strategy was not included on the initial list used in the survey.

Source: from Schmitt (1997:207-8)

Appendix Eight

Nation's (2001) sequenced list of derivational affixes for learners of English

A sequenced list of derivational affixes for learners of English

Stage 1

-able, -er, -ish, -less, -ly, -ness, -th, -y, non-, un- (all with restricted uses)

Stage 2

-al, -ation, -ess, -ful, -ism, -ist, -ity, -ize, -ment, -ous, in- (all with restricted uses)

Stage 3

-age (leakage), *-al* (arrival), *-ally* (idiotically), *-an* (American), *-ance* (clearance), *-ant* (consultant), *-ary* (revolutionary), *-atory* (confirmatory), *-dom* (kingdom, officialdom), *-eer* (black marketeer), *-en* (wooden), *-en* (widen), *-ence* (emergence), *-ent* (absorbent), *-ery* (bakery, trickery), *-ese* (Japanese, officialese), *-esque* (picturesque), *-ette* (usherette, roomette), *-hood* (childhood), *-i* (Israeli), *-ian* (phonetician, Johnsonian), *-ite* (Paisleyite; also chemical meaning), *-let* (coverlet), *-ling* (duckling), *-ly* (leisurely), *-most* (topmost), *-ory* (contradictory), *-ship* (studentship), *-ward* (homeward), *-ways* (crossways), *-wise* (endwise, discussion-wise), *anti-* (anti-inflation), *ante-* (anteroom), *arch-* (archbishop), *bi-* (biplane), *circum-* (circumnavigate), *counter-* (counter-attack), *en-* (encage, enslave), *ex-* (ex-president), *fore-* (forename), *hyper-* (hyperactive), *inter-* (inter-African, interweave), *mid-* (mid-week), *mis-* (misfit), *neo-* (neo-colonialism), *post-* (post-date), *pro-* (pro-British), *semi-* (semi-automatic), *sub-* (subclassify, subterranean), *un-* (untie, unburden)

Stage 4

-able, -ee, -ic, -ify, -ion, -ist, -ition, -ive, -th, -y, pre-, re-

Stage 5

-ar (circular), *-ate* (compassionate, captivate, electorate), *-et* (packet, casket), *-some* (troublesome), *-ure* (departure, exposure), *ab-*, *ad-*, *com-*, *de-*, *dis-*, *ex-* ('out'), *in-* ('in'), *ob-*, *per-*, *pro-* ('in front of'), *trans-*

Appendix Nine

Laufer's (1997) ten types of confusing similar lexical items (synforms)

- Category 1 – synforms which have the same root, productive in present-day English but different suffixes (e.g. *considerable/considerate, imaginary/imaginative/imaginable*).
- Category 2 – synforms which have the same root, not productive in present-day English, but different suffixes (e.g. *capable/capacious, integrity/integration*).
- Category 3 – synforms which differ from each other in a suffix present in one synform but not in the other (e.g. *historic/historical, sect/sector*).
- Category 4 – synforms which have the same root, not productive in present-day English, but different prefixes (e.g. *consumption/resumption/assumption, compress/suppress/repress/oppress*).
- Category 5 – synforms which differ from each other in a prefix present in one synform but not in the other (e.g. *passion/compassion, fault/default*).
- Category 6 – synforms identical in all their phonemes except one vowel/diphthong in the same position (e.g. *affect/effect, set/sat*).
- Category 7 – synforms which differ from each other in a vowel sound present in one synform but not in the other (e.g. *cutel/acute, quiet/quiet, date/data*). (Sometimes sound differences are reflected in the script, sometimes not.)
- Category 8 – synforms identical in all their phonemes except one consonant (e.g. *price/prize, extend/extent*).
- Category 9 – synforms which differ from each other in a consonant present in one synform but not in the other (e.g. *ledge/pledge, simulate/stimulate, mean/means*).
- Category 10 – synforms identical to each other in their consonants but different in their vowels (more than one vowel) (e.g. *base/bias, manual/menial*).

Source: from Schmitt (1997:148)

Appendix Ten, A

The Arabic version of the questionnaire:

بسم الله الرحمن الرحيم
أخي الطالب

هذه المذكرة عبارة عن استبيان يهدف إلى التعرف على تجربتك و آراءك حول استراتيجيات تعلم المفردات، لذا أرجو أن تكون الإجابات واضحة وصحيحة لكي تعكس تجربتك ونظرتك الحقيقية لبعض الأمور المتعلقة بتعلم المفردات و لذلك أتمنى أن لا تكون الإجابات مبنية على مبدأ مجاملة الباحث أو إعطاء إجابات نموذجية وقد تم تحديد الإجابة لمعظم الأسئلة، كما تم ترك مساحة بعد كل سؤال لإضافة ما ترغب من تعليق أو تعقيب، و يمكنك استخدام ظهر الورقة إذا رغبت في إضافة المزيد من التعليق على أي سؤال مع مراعاة كتابة رقم السؤال المعني، وكن على ثقة تامة بأنه لن تتم الإشارة إلى أسماء الطلاب المشاركين في الاستبيان، فلا تتردد في التعبير عن آرائك بكل صراحة ووضوح، فهذا الاستبيان ليس وسيلة لتقييم اكتسابك لمفردات اللغة الإنجليزية بل هو لمجرد التعرف على تجربتك في هذا الجانب اللغوي الهام وإعطائك مساحة كافية للتعبير عن آرائك وأفكارك، إذ يهدف الاستبيان في النهاية إلى طرح عدد من المقترحات التي تهدف إلى تطوير اكتساب مفردات اللغة الإنجليزية لدى طلاب القسم والله ولي التوفيق

الاسم (اختياري):
المستوى:

استراتيجيات الإعداد العام والتخطيط

- 1- (أ) هل تحاول تعلم كلمات جديدة من خلال استخدام قائمة مفردات منشورة (word lists)؟
- دائماً ()، غالباً ()، أحياناً ()، نادراً ()، لم يسبق لي القيام بذلك () .
(ب) ما رأيك بهذه الاستراتيجية؟
- مفيدة جداً ()، مفيدة ()، مفيدة بشكل محدود ()، ليست مفيدة ()، لا أعرف () .
تعليقات إضافية:

- 2- (أ) هل تحاول تعلم كلمات جديدة من خلال استخدام بطاقات كلمات منشورة (flash cards)؟
- دائماً ()، غالباً ()، أحياناً ()، نادراً ()، لم يسبق لي القيام بذلك () .
(ب) ما رأيك بهذه الاستراتيجية؟
- مفيدة جداً ()، مفيدة ()، مفيدة بشكل محدود ()، ليست مفيدة ()، لا أعرف () .
تعليقات إضافية:

- 3- (أ) هل تحاول تطوير مفرداتك من خلال القراءة المباشرة في القاموس؟
- دائماً ()، غالباً ()، أحياناً ()، نادراً ()، لم يسبق لي القيام بذلك () .
(ب) ما رأيك بهذه الاستراتيجية؟
- مفيدة جداً ()، مفيدة ()، مفيدة بشكل محدود ()، ليست مفيدة ()، لا أعرف () .
تعليقات إضافية:

- 4- (أ) هل درست نظام السوابق و اللواحق في اللغة الإنجليزية؟

- (ب) ما رأيك بهذه الاستراتيجية؟
- مفيدة جداً ()، مفيدة ()، مفيدة بشكل محدود ()، ليست مفيدة ()، لا أعرف () .
تعليقات إضافية:

- 5- (أ) هل تحاول تطوير مفرداتك من خلال الاستفادة من القنوات التلفزيونية؟
 - دائماً () ، غالباً () ، أحياناً () ، نادراً () ، لم يسبق لي القيام بذلك () .
 (ب) ما رأيك بهذه الاستراتيجية؟
 - مفيدة جداً () ، مفيدة () ، مفيدة بشكل محدود () ، ليست مفيدة () ، لا أعرف () .
 تعليقات إضافية:

أذكر هذه القنوات.

- 6- (أ) هل تحاول تطوير مفرداتك من خلال الاستفادة من برامج الراديو باللغة الإنجليزية؟
 - دائماً () ، غالباً () ، أحياناً () ، نادراً () ، لم يسبق لي القيام بذلك () .
 (ب) ما رأيك بهذه الاستراتيجية؟
 - مفيدة جداً () ، مفيدة () ، مفيدة بشكل محدود () ، ليست مفيدة () ، لا أعرف () .
 تعليقات إضافية:

أذكر الإذاعات التي تستمع لها.

- 7- (أ) هل تحاول تطوير مفرداتك من خلال الاستفادة من قراءة الصحف الإنجليزية؟
 - دائماً () ، غالباً () ، أحياناً () ، نادراً () ، لم يسبق لي القيام بذلك () .
 (ب) ما رأيك بهذه الاستراتيجية؟
 - مفيدة جداً () ، مفيدة () ، مفيدة بشكل محدود () ، ليست مفيدة () ، لا أعرف () .
 تعليقات إضافية:

وما هي هذه الصحف؟

- 8- (أ) هل تحاول تطوير مفرداتك من خلال تصفح الإنترنت؟
 - دائماً () ، غالباً () ، أحياناً () ، نادراً () ، لم يسبق لي القيام بذلك () .
 (ب) ما رأيك بهذه الاستراتيجية؟
 - مفيدة جداً () ، مفيدة () ، مفيدة بشكل محدود () ، ليست مفيدة () ، لا أعرف () .
 تعليقات إضافية:

ما هي المواقع الإنجليزية التي تفتحها عادة؟

- 9- (أ) هل تستفيد من الترجمة المكتوبة على الشاشة للبرامج الإنجليزية؟
 - دائماً () ، غالباً () ، أحياناً () ، نادراً () ، لم يسبق لي القيام بذلك () .
 (ب) ما رأيك بهذه الاستراتيجية؟
 - مفيدة جداً () ، مفيدة () ، مفيدة بشكل محدود () ، ليست مفيدة () ، لا أعرف () .
 تعليقات إضافية:

10- (أ) هل تطبيق القراءة المتدرجة لتطوير مفرداتك؟

- دائماً ()، غالباً ()، أحياناً ()، نادراً ()، لم يسبق لي القيام بذلك ().
(ب) ما رأيك بهذه الاستراتيجية؟

- مفيدة جداً ()، مفيدة ()، مفيدة بشكل محدود ()، ليست مفيدة ()، لا أعرف ().
تعليقات إضافية:

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11- (أ) هل تطبيق القراءة المحصورة في موضوع معين أو مواضيع مترابطة لتطوير مفرداتك؟

- دائماً ()، غالباً ()، أحياناً ()، نادراً ()، لم يسبق لي القيام بذلك ().
(ب) ما رأيك بهذه الاستراتيجية؟

- مفيدة جداً ()، مفيدة ()، مفيدة بشكل محدود ()، ليست مفيدة ()، لا أعرف ().
تعليقات إضافية:

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12- (أ) هل تطبيق القراءة الحرة (خارج المناهج) لتطوير مفرداتك؟

- دائماً ()، غالباً ()، أحياناً ()، نادراً ()، لم يسبق لي القيام بذلك ().
(ب) ما رأيك بهذه الاستراتيجية؟

- مفيدة جداً ()، مفيدة ()، مفيدة بشكل محدود ()، ليست مفيدة ()، لا أعرف ().
تعليقات إضافية:

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13- (أ) هل تطبيق استراتيجية تجاهل المفردات الجديدة؟ اشرح الإجابة.

- دائماً ()، غالباً ()، أحياناً ()، نادراً ()، لم يسبق لي القيام بذلك ().
(ب) ما رأيك بهذه الاستراتيجية؟

- مفيدة جداً ()، مفيدة ()، مفيدة بشكل محدود ()، ليست مفيدة ()، لا أعرف ().
تعليقات إضافية:

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14- (أ) هل لديك خطة مراجعة للمفردات الجديدة التي تعلمتها؟

- دائماً ()، غالباً ()، أحياناً ()، نادراً ()، لم يسبق لي القيام بذلك ().
(ب) ما رأيك بهذه الاستراتيجية؟

- مفيدة جداً ()، مفيدة ()، مفيدة بشكل محدود ()، ليست مفيدة ()، لا أعرف ().
تعليقات إضافية:

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15- (أ) هل تقوم بتقييم مستوى مفرداتك؟

- دائماً ()، غالباً ()، أحياناً ()، نادراً ()، لم يسبق لي القيام بذلك ().
(ب) ما رأيك بهذه الاستراتيجية؟

- مفيدة جداً ()، مفيدة ()، مفيدة بشكل محدود ()، ليست مفيدة ()، لا أعرف ().
تعليقات إضافية:

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16- (أ) هل تقوم بوضع خطة لمواصلة تعلم المفردات؟

- دائماً ()، غالباً ()، أحياناً ()، نادراً ()، لم يسبق لي القيام بذلك ().
(ب) ما رأيك بهذه الاستراتيجية؟

- مفيدة جداً ()، مفيدة ()، مفيدة بشكل محدود ()، ليست مفيدة ()، لا أعرف ().
تعليقات إضافية:

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17- (أ) هل تحاول التحدث مع أهل اللغة أو غيرهم ممن يجيد اللغة الإنجليزية لتقوية مفرداتك؟

- دائماً ()، غالباً ()، أحياناً ()، نادراً ()، لم يسبق لي القيام بذلك () .

(ب) ما رأيك بهذه الاستراتيجية؟

- مفيدة جداً ()، مفيدة ()، مفيدة بشكل محدود ()، ليست مفيدة ()، لا أعرف () .
تعليقات إضافية:

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18- (أ) هل تقوم بمناقشة الأستاذة فيما يتعلق بمشاكل تطوير مفرداتك؟

- دائماً ()، غالباً ()، أحياناً ()، نادراً ()، لم يسبق لي القيام بذلك () .

(ب) ما رأيك بهذه الاستراتيجية؟

- مفيدة جداً ()، مفيدة ()، مفيدة بشكل محدود ()، ليست مفيدة ()، لا أعرف () .
تعليقات إضافية:

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19- (أ) هل تتعاون مع زملائك من أجل تطوير مستواك اللغوي ومخزونك من المفردات سواء بنقاش المسائل المتعلقة بذلك أو تبادل الكتب أو الأشرطة أو غير ذلك؟

- دائماً ()، غالباً ()، أحياناً ()، نادراً ()، لم يسبق لي القيام بذلك () .

(ب) ما رأيك بهذه الاستراتيجية؟

- مفيدة جداً ()، مفيدة ()، مفيدة بشكل محدود ()، ليست مفيدة ()، لا أعرف () .
تعليقات إضافية:

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20- (أ) هل حاولت تعلم استراتيجيات تعلم المفردات أو تعلم طبيعة اكتساب مفردات اللغة الإنجليزية؟

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(ب) ما رأيك بهذه الاستراتيجية؟

- مفيدة جداً ()، مفيدة ()، مفيدة بشكل محدود ()، ليست مفيدة ()، لا أعرف () .
تعليقات إضافية:

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استراتيجيات اكتشاف المعلومات

21- (أ) هل تستخدم القاموس الثنائي اللغة (إنجليزي-عربي) ؟

- دائماً ()، غالباً ()، أحياناً ()، نادراً ()، لم يسبق لي القيام بذلك () .

(ب) ما رأيك بهذه الاستراتيجية؟

- مفيدة جداً ()، مفيدة ()، مفيدة بشكل محدود ()، ليست مفيدة ()، لا أعرف () .
تعليقات إضافية:

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ما اسم القاموس الثنائي اللغة (إنجليزي-عربي) الذي تستخدمه عادة؟ إذا كنت تستخدم عدة قواميس فاذكرها.

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22- (أ) هل تستخدم القاموس الأحادي اللغة (إنجليزي-إنجليزي) للبحث عن معاني الكلمات الجديدة؟

- دائماً ()، غالباً ()، أحياناً ()، نادراً ()، لم يسبق لي القيام بذلك () .

(ب) ما رأيك بهذه الاستراتيجية؟

- مفيدة جداً ()، مفيدة ()، مفيدة بشكل محدود ()، ليست مفيدة ()، لا أعرف () .
تعليقات إضافية:

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ما اسم القاموس الأحادي اللغة (إنجليزي-إنجليزي) الذي تستخدمه عادة؟ إذا كنت تستخدم عدة قواميس فاذكرها.

أيهما أكثر فائدة في نظرك: القاموس الثنائي اللغة (إنجليزي-عربي) أم القاموس الأحادي اللغة (إنجليزي-إنجليزي)؟ ولماذا؟

23- (أ) هل تستخدم القاموس العربي-إنجليزي للبحث عن المرادف الإنجليزي لبعض الكلمات العربية، خاصة عند كتابة مقال أو رسالة إلكترونية (e-mail) أو غيرها؟

- دائماً ()، غالباً ()، أحياناً ()، نادراً ()، لم يسبق لي القيام بذلك () .

(ب) ما رأيك بهذه الاستراتيجية؟

- مفيدة جداً ()، مفيدة ()، مفيدة بشكل محدود ()، ليست مفيدة ()، لا أعرف () .
تعليقات إضافية:

ما اسم القاموس العربي-إنجليزي الذي تستخدمه عادة؟ إذا كنت تستخدم عدة قواميس فاذكرها.

24- (أ) هل تستخدم القاموس الإلكتروني للبحث عن معاني الكلمات الجديدة؟

- دائماً ()، غالباً ()، أحياناً ()، نادراً ()، لم يسبق لي القيام بذلك () .

(ب) ما رأيك بهذه الاستراتيجية؟

- مفيدة جداً ()، مفيدة ()، مفيدة بشكل محدود ()، ليست مفيدة ()، لا أعرف () .
تعليقات إضافية:

ما هي مميزات و عيوب القاموس الإلكتروني في نظرك؟

25- (أ) هل تستخدم القسم الخاص ببعض المفردات الجديدة (glossary) والذي يكون عادة في نهاية بعض الكتب؟

- دائماً ()، غالباً ()، أحياناً ()، نادراً ()، لم يسبق لي القيام بذلك () .

(ب) ما رأيك بهذه الاستراتيجية؟

- مفيدة جداً ()، مفيدة ()، مفيدة بشكل محدود ()، ليست مفيدة ()، لا أعرف () .
تعليقات إضافية:

26- (أ) هل تستخدم برامج الترجمة السريعة في الحاسب الآلي؟ اذكرها.

- دائماً ()، غالباً ()، أحياناً ()، نادراً ()، لم يسبق لي القيام بذلك () .

(ب) ما رأيك بهذه الاستراتيجية؟

- مفيدة جداً ()، مفيدة ()، مفيدة بشكل محدود ()، ليست مفيدة ()، لا أعرف () .
تعليقات إضافية:

27- (أ) إذا كنت تستخدم برنامج Microsoft Word هل تستخدم خاصية قاموس المترادفات الموجودة في أيقونة اللغة؟

- دائماً ()، غالباً ()، أحياناً ()، نادراً ()، لم يسبق لي القيام بذلك () .

(ب) ما رأيك بهذه الإستراتيجية؟

- مفيدة جداً ()، مفيدة ()، مفيدة بشكل محدود ()، ليست مفيدة ()، لا أعرف () .
تعليقات إضافية:

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28- (أ) هل تقوم بتخمين معنى الكلمة الجديدة؟

- دائماً ()، غالباً ()، أحياناً ()، نادراً ()، لم يسبق لي القيام بذلك () .

(ب) ما رأيك بهذه الإستراتيجية؟

- مفيدة جداً ()، مفيدة ()، مفيدة بشكل محدود ()، ليست مفيدة ()، لا أعرف () .
تعليقات إضافية:

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29- (أ) هل تتعرف على معنى الكلمة من خلال تحليل أجزائها، مثل كلمة "sociology" ؟

- دائماً ()، غالباً ()، أحياناً ()، نادراً ()، لم يسبق لي القيام بذلك () .

(ب) ما رأيك بهذه الإستراتيجية؟

- مفيدة جداً ()، مفيدة ()، مفيدة بشكل محدود ()، ليست مفيدة ()، لا أعرف () .
تعليقات إضافية:

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30- (أ) هل تطلب المساعدة من أستاذك؟

- دائماً ()، غالباً ()، أحياناً ()، نادراً ()، لم يسبق لي القيام بذلك () .

(ب) ما رأيك بهذه الإستراتيجية؟

- مفيدة جداً ()، مفيدة ()، مفيدة بشكل محدود ()، ليست مفيدة ()، لا أعرف () .
تعليقات إضافية:

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31- (أ) هل تطلب المساعدة من زملائك؟

- دائماً ()، غالباً ()، أحياناً ()، نادراً ()، لم يسبق لي القيام بذلك () .

(ب) ما رأيك بهذه الإستراتيجية؟

- مفيدة جداً ()، مفيدة ()، مفيدة بشكل محدود ()، ليست مفيدة ()، لا أعرف () .
تعليقات إضافية:

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ما هي المعلومات التي تطلبها من زملائك عادة

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.....

32- (أ) هل تمارس استراتيجية التعرف على معاني الكلمات الجديدة من خلال العمل في مجموعة؟

- دائماً ()، غالباً ()، أحياناً ()، نادراً ()، لم يسبق لي القيام بذلك () .

(ب) ما رأيك بهذه الاستراتيجية؟

- مفيدة جداً ()، مفيدة ()، مفيدة بشكل محدود ()، ليست مفيدة ()، لا أعرف () .
تعليقات إضافية:

.....
.....

33- (أ) هل تحول ترسيخ الكلمة الجديدة من خلال تطبيق استراتيجية استخدام الصور أو التخيل؟

- دائماً ()، غالباً ()، أحياناً ()، نادراً ()، لم يسبق لي القيام بذلك () .

(ب) ما رأيك بهذه الاستراتيجية؟ - مفيدة جداً ()، مفيدة بشكل محدود ()، ليست مفيدة ()، لا أعرف () .
تعليقات إضافية:

.....
.....
.....

34- (أ) هل تحول ترسيخ الكلمة الجديدة من خلال استخدام استراتيجية the Keyword method ؟ كن تربط كلمة encounter بصورة شخص يقف بمواجهة كاونتر، أو تربط كلمة minor بصورة جزء صغير من نور، أو تربط كلمة symbol بصورة سنبله كرمز للخير.

- دائماً ()، غالباً ()، أحياناً ()، نادراً ()، لم يسبق لي القيام بذلك () .

(ب) ما رأيك بهذه الاستراتيجية؟

- مفيدة جداً ()، مفيدة ()، مفيدة بشكل محدود ()، ليست مفيدة ()، لا أعرف () .
تعليقات إضافية:

.....
.....
.....

35- (أ) هل تحول ترسيخ الكلمات الجديدة من خلال استخدام جدول خصائص المعنى؟

- دائماً ()، غالباً ()، أحياناً ()، نادراً ()، لم يسبق لي القيام بذلك () .

(ب) ما رأيك بهذه الاستراتيجية؟

- مفيدة جداً ()، مفيدة ()، مفيدة بشكل محدود ()، ليست مفيدة ()، لا أعرف () .
تعليقات إضافية:

.....
.....
.....

36- (أ) هل تستخدم خرائط المعنى لترسيخ معاني الكلمات الجديدة؟

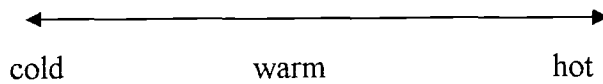
- دائماً ()، غالباً ()، أحياناً ()، نادراً ()، لم يسبق لي القيام بذلك () .

(ب) ما رأيك بهذه الاستراتيجية؟

- مفيدة جداً ()، مفيدة ()، مفيدة بشكل محدود ()، ليست مفيدة ()، لا أعرف () .
تعليقات إضافية:

.....
.....
.....

37- (أ) هل تستخدم خط ميزان الكلمات لترسيخ معاني الكلمات المتدرجة؟



- دائماً ()، غالباً ()، أحياناً ()، نادراً ()، لم يسبق لي القيام بذلك () .

(ب) ما رأيك بهذه الاستراتيجية؟

- مفيدة جداً ()، مفيدة ()، مفيدة بشكل محدود ()، ليست مفيدة ()، لا أعرف () .
تعليقات إضافية:

.....
.....
.....

38- (أ) هل تحول هل تحول ترسيخ الكلمة الجديدة من خلال ربطها بالكلمات الملازمة لها؟ كن تربط الكلمات التالية ببعضها :

keep quite, take a look, football team, run a business, consider seriously, nice to see you.

- دائماً ()، غالباً ()، أحياناً ()، نادراً ()، لم يسبق لي القيام بذلك () .

(ب) ما رأيك بهذه الاستراتيجية؟

- مفيدة جداً ()، مفيدة ()، مفيدة بشكل محدود ()، ليست مفيدة ()، لا أعرف () .
تعليقات إضافية:

.....
.....
.....

39- (أ) هل نحاول ترسيخ الكلمة الجديدة من خلال وضعها في سياق؟

- دائماً () ، غالباً () ، أحياناً () ، نادراً () ، لم يسبق لي القيام بذلك () .

(ب) ما رأيك بهذه الإستراتيجية؟

- مفيدة جداً () ، مفيدة () ، مفيدة بشكل محدود () ، ليست مفيدة () ، لا أعرف () .
تعليقات إضافية:

.....
.....
.....

40- (أ) هل نحاول ترسيخ الكلمة الجديدة من خلال دراسة نطقها؟

- دائماً () ، غالباً () ، أحياناً () ، نادراً () ، لم يسبق لي القيام بذلك () .

(ب) ما رأيك بهذه الإستراتيجية؟

- مفيدة جداً () ، مفيدة () ، مفيدة بشكل محدود () ، ليست مفيدة () ، لا أعرف () .
تعليقات إضافية:

.....
.....
.....

41- (أ) هل نحاول ترسيخ الكلمة الجديدة من خلال دراسة تهجيتها؟

- دائماً () ، غالباً () ، أحياناً () ، نادراً () ، لم يسبق لي القيام بذلك () .

(ب) ما رأيك بهذه الإستراتيجية؟

- مفيدة جداً () ، مفيدة () ، مفيدة بشكل محدود () ، ليست مفيدة () ، لا أعرف () .
تعليقات إضافية:

.....
.....
.....

42- (أ) هل نحاول ترسيخ الكلمة الجديدة من خلال ربط معنى الكلمة بتجربة شخصية مرت بها؟ كأن تربط كلمة research بمادة البحث؟

- دائماً () ، غالباً () ، أحياناً () ، نادراً () ، لم يسبق لي القيام بذلك () .

(ب) ما رأيك بهذه الإستراتيجية؟

- مفيدة جداً () ، مفيدة () ، مفيدة بشكل محدود () ، ليست مفيدة () ، لا أعرف () .
تعليقات إضافية:

.....
.....
.....

43- (أ) هل نحاول ترسيخ الكلمة الجديدة من خلال ربطها بمرادفاتها أو أضدادها؟

- دائماً () ، غالباً () ، أحياناً () ، نادراً () ، لم يسبق لي القيام بذلك () .

(ب) ما رأيك بهذه الإستراتيجية؟

- مفيدة جداً () ، مفيدة () ، مفيدة بشكل محدود () ، ليست مفيدة () ، لا أعرف () .
تعليقات إضافية:

.....
.....
.....

44- (أ) هل نحاول ترسيخ الكلمة الجديدة من خلال ربطها بمثيلاتها؟ كأن تربط كلمة cherries بالكلمات التالية: pears , apple , peaches وغيرها من أنواع الفاكهة.

- دائماً () ، غالباً () ، أحياناً () ، نادراً () ، لم يسبق لي القيام بذلك () .

(ب) ما رأيك بهذه الإستراتيجية؟

- مفيدة جداً () ، مفيدة () ، مفيدة بشكل محدود () ، ليست مفيدة () ، لا أعرف () .
تعليقات إضافية:

.....
.....
.....

45- (أ) هل تحاول ترسيخ الكلمة الجديدة من خلال تكرار نطقها؟

- دائماً ()، غالباً ()، أحياناً ()، نادراً ()، لم يسبق لي القيام بذلك () .
(ب) ما رأيك بهذه الإستراتيجية؟
- مفيدة جداً ()، مفيدة ()، مفيدة بشكل محدود ()، ليست مفيدة ()، لا أعرف () .
تعليقات إضافية:

.....
.....
.....

46- (أ) هل تحاول ترسيخ الكلمة الجديدة من خلال تكرار كتابتها؟

- دائماً ()، غالباً ()، أحياناً ()، نادراً ()، لم يسبق لي القيام بذلك () .
(ب) ما رأيك بهذه الإستراتيجية؟
- مفيدة جداً ()، مفيدة ()، مفيدة بشكل محدود ()، ليست مفيدة ()، لا أعرف () .
تعليقات إضافية:

.....
.....
.....

47- (أ) هل تحاول ترسيخ الكلمات الجديدة من خلال تكرار الاستماع إلى قصة مسجلة؟

- دائماً ()، غالباً ()، أحياناً ()، نادراً ()، لم يسبق لي القيام بذلك () .
(ب) ما رأيك بهذه الإستراتيجية؟
- مفيدة جداً ()، مفيدة ()، مفيدة بشكل محدود ()، ليست مفيدة ()، لا أعرف () .
تعليقات إضافية:

.....
.....
.....

48- (أ) هل تحاول ترسيخ الكلمة الجديدة من خلال تكرار الاستماع إلى قائمة مفردات مسجلة؟

- دائماً ()، غالباً ()، أحياناً ()، نادراً ()، لم يسبق لي القيام بذلك () .
(ب) ما رأيك بهذه الإستراتيجية؟
- مفيدة جداً ()، مفيدة ()، مفيدة بشكل محدود ()، ليست مفيدة ()، لا أعرف () .
تعليقات إضافية:

.....
.....
.....

49- (أ) هل تحاول ترسيخ الكلمة الجديدة من خلال تكرار الاستماع إلى مواد مسجلة أخرى (غير القصة وقائمة مفردات)؟

- دائماً ()، غالباً ()، أحياناً ()، نادراً ()، لم يسبق لي القيام بذلك () .
(ب) ما رأيك بهذه الإستراتيجية؟
- مفيدة جداً ()، مفيدة ()، مفيدة بشكل محدود ()، ليست مفيدة ()، لا أعرف () .
تعليقات إضافية:

.....
.....
.....

50- (أ) هل تحاول ترسيخ الكلمات الجديدة من خلال تدوين الملاحظات؟

- دائماً ()، غالباً ()، أحياناً ()، نادراً ()، لم يسبق لي القيام بذلك () .
(ب) ما رأيك بهذه الإستراتيجية؟
- مفيدة جداً ()، مفيدة ()، مفيدة بشكل محدود ()، ليست مفيدة ()، لا أعرف () .
تعليقات إضافية:

.....
.....
.....

51- (أ) هل تحاول ترسيخ الكلمات الجديدة من خلال تصميم قائمة مفردات؟

- دائماً ()، غالباً ()، أحياناً ()، نادراً ()، لم يسبق لي القيام بذلك () .
(ب) ما رأيك بهذه الإستراتيجية؟
- مفيدة جداً ()، مفيدة ()، مفيدة بشكل محدود ()، ليست مفيدة ()، لا أعرف () .
تعليقات إضافية:

.....
.....
.....

52- (أ) هل تحاول ترسيخ الكلمات الجديدة من خلال تصميم بطاقات كلمات؟

- دائماً ()، غالباً ()، أحياناً ()، نادراً ()، لم يسبق لي القيام بذلك () .
(ب) ما رأيك بهذه الاستراتيجية؟
- مفيدة جداً ()، مفيدة ()، مفيدة بشكل محدود ()، ليست مفيدة ()، لا أعرف () .
تعليقات إضافية:

53- (أ) هل تحاول ترسيخ الكلمات الجديدة من خلال استخدام مواد المراجعة؟

- دائماً ()، غالباً ()، أحياناً ()، نادراً ()، لم يسبق لي القيام بذلك () .
(ب) ما رأيك بهذه الاستراتيجية؟
- مفيدة جداً ()، مفيدة ()، مفيدة بشكل محدود ()، ليست مفيدة ()، لا أعرف () .
تعليقات إضافية:

54- هل هناك استراتيجية تعلم أو ترسيخ مفردات تستخدمها و لم يتم ذكرها في هذا الاستبيان؟

فضلاً تأكد من إجابة جميع الأسئلة مع جزيل الشكر

Appendix Ten, B

The English version of the questionnaire:

Section One: Metacognitive Vocabulary Learning Strategies

1. learning words from a published word list:

How often do you use this strategy?

always (), often (), sometimes (), rarely (), never ()

extra comments:

.....
.....

How useful do you think this strategy is?

very useful (), useful (), quite useful (), not useful (), I don't know ()

.....
.....

2. learning words from published word cards:

How often do you use this strategy?

always (), often (), sometimes (), rarely (), never ()

extra comments:

.....
.....

How useful do you think this strategy is?

very useful (), useful (), quite useful (), not useful (), I don't know ()

.....
.....

3. trying to learn directly from a dictionary:

How often do you use this strategy?

always (), often (), sometimes (), rarely (), never ()

extra comments:

.....
.....

How useful do you think this strategy is?

very useful (), useful (), quite useful (), not useful (), I don't know ()

.....
.....

4. studying the English affixation system:

How often do you use this strategy?

always (), often (), sometimes (), rarely (), never ()

extra comments:

.....
.....

How useful do you think this strategy is?

very useful (), useful (), quite useful (), not useful (), I don't know ()

.....
.....

5. watching TV channels:

How often do you use this strategy?

always (), often (), sometimes (), rarely (), never ()

extra comments:

.....
.....

How useful do you think this strategy is?

very useful (), useful (), quite useful (), not useful (), I don't know ()

.....
.....

Mention the TV channels that you usually watch:

.....
.....

6. listening to radio programmes:

How often do you use this strategy?

always (), often (), sometimes (), rarely (), never ()

extra comments:

.....
.....

How useful do you think this strategy is?

very useful (), useful (), quite useful (), not useful (), I don't know ()

.....
.....

Mention the radio stations that you usually listen to:

.....
.....

7. reading newspapers:

How often do you use this strategy?

always (), often (), sometimes (), rarely (), never ()

extra comments:

.....
.....

How useful do you think this strategy is?

very useful (), useful (), quite useful (), not useful (), I don't know ()

.....
.....

Mention the newspapers that you usually read:

.....
.....

8. surfing the internet:

How often do you use this strategy?

always (), often (), sometimes (), rarely (), never ()

extra comments:

.....
.....

How useful do you think this strategy is?

very useful (), useful (), quite useful (), not useful (), I don't know ()

.....
.....

Mention the internet sites that you usually visit:

.....
.....

9. making use of on screen English↔Arabic translation

How often do you use this strategy?

always (), often (), sometimes (), rarely (), never ()

extra comments:

.....
.....

How useful do you think this strategy is?

very useful (), useful (), quite useful (), not useful (), I don't know ()

.....
.....

10. learning vocabulary through graded reading

How often do you use this strategy?

always (), often (), sometimes (), rarely (), never ()

extra comments:

.....
.....

How useful do you think this strategy is?

very useful (), useful (), quite useful (), not useful (), I don't know ()

.....
.....

11. learning vocabulary through controlled reading:

How often do you use this strategy?

always (), often (), sometimes (), rarely (), never ()

extra comments:

.....
.....

How useful do you think this strategy is?

very useful (), useful (), quite useful (), not useful (), I don't know ()

.....
.....

12. learning vocabulary through free reading:

How often do you use this strategy?

always (), often (), sometimes (), rarely (), never ()

extra comments:

.....
.....

How useful do you think this strategy is?

very useful (), useful (), quite useful (), not useful (), I don't know ()

.....
.....

13. ignoring new words:

How often do you use this strategy?

always (), often (), sometimes (), rarely (), never ()

extra comments:

.....
.....

How useful do you think this strategy is?

very useful (), useful (), quite useful (), not useful (), I don't know ()

.....
.....

14. planning vocabulary revision:

How often do you use this strategy?

always (), often (), sometimes (), rarely (), never ()

extra comments:

.....
.....

How useful do you think this strategy is?

very useful (), useful (), quite useful (), not useful (), I don't know ()

.....
.....

15. evaluating vocabulary knowledge:

How often do you use this strategy?

always (), often (), sometimes (), rarely (), never ()

extra comments:

.....
.....

How useful do you think this strategy is?

very useful (), useful (), quite useful (), not useful (), I don't know ()

.....
.....

16. continuing to learn vocabulary over time

How often do you use this strategy?

always (), often (), sometimes (), rarely (), never ()

extra comments:

.....
.....

How useful do you think this strategy is?

very useful (), useful (), quite useful (), not useful (), I don't know ()

.....
.....

17. interacting with native speakers of English:

How often do you use this strategy?

always (), often (), sometimes (), rarely (), never ()

extra comments:

.....
.....

How useful do you think this strategy is?

very useful (), useful (), quite useful (), not useful (), I don't know ()

.....
.....

18. discussing vocabulary learning problems and requirements with a teacher:

How often do you use this strategy?

always (), often (), sometimes (), rarely (), never ()

extra comments:

.....
.....

How useful do you think this strategy is?

very useful (), useful (), quite useful (), not useful (), I don't know ()

.....
.....

19. co-operating with classmates to improve vocabulary:

How often do you use this strategy?

always (), often (), sometimes (), rarely (), never ()

extra comments:

.....
.....

How useful do you think this strategy is?

very useful (), useful (), quite useful (), not useful (), I don't know ()

.....
.....

20. Have you tried to learn about VLSs and the nature of L2 vocabulary learning before?

.....
.....

How useful do you think this strategy is?

very useful (), useful (), quite useful (), not useful (), I don't know ()

.....
.....

Section Two: Discovery Strategies

21. using English-Arabic dictionaries:

How often do you use this strategy?

always (), often (), sometimes (), rarely (), never ()

extra comments:

.....
.....

How useful do you think this strategy is?

very useful (), useful (), quite useful (), not useful (), I don't know ()

.....
.....

Mention the English/Arabic dictionary or dictionaries that you usually use:

.....
.....

22. using English-English dictionaries:

How often do you use this strategy?

always (), often (), sometimes (), rarely (), never ()

extra comments:

.....
.....

How useful do you think this strategy is?

very useful (), useful (), quite useful (), not useful (), I don't know ()

.....
.....

Mention the English/English dictionary or dictionaries that you usually use:

.....
.....

Which one is more useful do you think: the English/Arabic dictionary or the English/English dictionary?

.....
.....

23. using Arabic-English dictionaries:

How often do you use this strategy?

always (), often (), sometimes (), rarely (), never ()

extra comments:

.....
.....

How useful do you think this strategy is?

very useful (), useful (), quite useful (), not useful (), I don't know ()

.....
.....

Mention the Arabic/English dictionary or dictionaries that you usually use:

.....
.....

24. using electronic dictionaries:

How often do you use this strategy?

always (), often (), sometimes (), rarely (), never ()

extra comments:

.....
.....

How useful do you think this strategy is?

very useful (), useful (), quite useful (), not useful (), I don't know ()

.....
.....

From your experience, what are the advantages and disadvantages of electronic dictionaries?

.....
.....

25. using vocabulary sections or glossaries:

How often do you use this strategy?

always (), often (), sometimes (), rarely (), never ()

extra comments:

.....
.....

How useful do you think this strategy is?

very useful (), useful (), quite useful (), not useful (), I don't know ()

.....
.....

26. using instant on-screen computer translation programmes:

How often do you use this strategy?

always (), often (), sometimes (), rarely (), never ()

extra comments:

.....
.....

How useful do you think this strategy is?

very useful (), useful (), quite useful (), not useful (), I don't know ()

.....
.....

27. using the *Microsoft Word* thesaurus icon:

How often do you use this strategy?

always (), often (), sometimes (), rarely (), never ()

extra comments:

.....
.....

How useful do you think this strategy is?

very useful (), useful (), quite useful (), not useful (), I don't know ()

.....
.....

28. using guessing strategies:

How often do you use this strategy?

always (), often (), sometimes (), rarely (), never ()

extra comments:

.....
.....

How useful do you think this strategy is?

very useful (), useful (), quite useful (), not useful (), I don't know ()

.....
.....

29. analysing affixes and roots:

How often do you use this strategy?

always (), often (), sometimes (), rarely (), never ()

extra comments:

.....
.....

How useful do you think this strategy is?

very useful (), useful (), quite useful (), not useful (), I don't know ()

.....
.....

30. seeking help from a teacher:

How often do you use this strategy?

always (), often (), sometimes (), rarely (), never ()

extra comments:

.....
.....

How useful do you think this strategy is?

very useful (), useful (), quite useful (), not useful (), I don't know ()

.....
.....

31. asking your classmates about the meaning of new words:

How often do you use this strategy?

always (), often (), sometimes (), rarely (), never ()

extra comments:

.....
.....

How useful do you think this strategy is?

very useful (), useful (), quite useful (), not useful (), I don't know ()

.....

.....
What is the information that you usually ask your classmate about?
.....
.....

32. discovering the meanings of new words through group work:

How often do you use this strategy?

always (), often (), sometimes (), rarely (), never ()

extra comments:
.....
.....

How useful do you think this strategy is?

very useful (), useful (), quite useful (), not useful (), I don't know ()
.....
.....

Section Three: Consolidation Strategies

33. using pictures/imagery:

How often do you use this strategy?

always (), often (), sometimes (), rarely (), never ()

extra comments:
.....
.....

How useful do you think this strategy is?

very useful (), useful (), quite useful (), not useful (), I don't know ()
.....
.....

34. using the keyword method:

How often do you use this strategy?

always (), often (), sometimes (), rarely (), never ()

extra comments:
.....
.....

How useful do you think this strategy is?

very useful (), useful (), quite useful (), not useful (), I don't know ()
.....
.....

35. using semantic feature grids:

How often do you use this strategy?

always (), often (), sometimes (), rarely (), never ()

extra comments:
.....
.....

How useful do you think this strategy is?

very useful (), useful (), quite useful (), not useful (), I don't know ()
.....
.....

36. using semantic maps:

How often do you use this strategy?

always (), often (), sometimes (), rarely (), never ()

extra comments:
.....
.....

How useful do you think this strategy is?

very useful (), useful (), quite useful (), not useful (), I don't know ()
.....
.....

37. using scales for gradable words:

How often do you use this strategy?

always (), often (), sometimes (), rarely (), never ()

extra comments:

.....
.....

How useful do you think this strategy is?

very useful (), useful (), quite useful (), not useful (), I don't know ()

.....
.....

38. learning multi-word units:

How often do you use this strategy?

always (), often (), sometimes (), rarely (), never ()

extra comments:

.....
.....

How useful do you think this strategy is?

very useful (), useful (), quite useful (), not useful (), I don't know ()

.....
.....

39. noting a new word into a sentence or a phrase:

How often do you use this strategy?

always (), often (), sometimes (), rarely (), never ()

extra comments:

.....
.....

How useful do you think this strategy is?

very useful (), useful (), quite useful (), not useful (), I don't know ()

.....
.....

40. studying the spelling of new words:

How often do you use this strategy?

always (), often (), sometimes (), rarely (), never ()

extra comments:

.....
.....

How useful do you think this strategy is?

very useful (), useful (), quite useful (), not useful (), I don't know ()

.....
.....

41. studying the pronunciation of new words:

How often do you use this strategy?

always (), often (), sometimes (), rarely (), never ()

extra comments:

.....
.....

How useful do you think this strategy is?

very useful (), useful (), quite useful (), not useful (), I don't know ()

.....
.....

42. connecting a word to a personal experience:

How often do you use this strategy?

always (), often (), sometimes (), rarely (), never ()

extra comments:

.....
.....

How useful do you think this strategy is?

very useful (), useful (), quite useful (), not useful (), I don't know ()

.....
.....

43. connecting a new word to its synonyms or antonyms:

How often do you use this strategy?

always (), often (), sometimes (), rarely (), never ()

extra comments:

.....
.....

How useful do you think this strategy is?

very useful (), useful (), quite useful (), not useful (), I don't know ()

.....
.....

44. associating a new word with its coordinates:

How often do you use this strategy?

always (), often (), sometimes (), rarely (), never ()

extra comments:

.....
.....

How useful do you think this strategy is?

very useful (), useful (), quite useful (), not useful (), I don't know ()

.....
.....

45. verbal repetition:

How often do you use this strategy?

always (), often (), sometimes (), rarely (), never ()

extra comments:

.....
.....

How useful do you think this strategy is?

very useful (), useful (), quite useful (), not useful (), I don't know ()

.....
.....

46. written repetition:

How often do you use this strategy?

always (), often (), sometimes (), rarely (), never ()

extra comments:

.....
.....

How useful do you think this strategy is?

very useful (), useful (), quite useful (), not useful (), I don't know ()

.....
.....

47. repeated listening to a tape-recorded story:

How often do you use this strategy?

always (), often (), sometimes (), rarely (), never ()

extra comments:

.....
.....

How useful do you think this strategy is?

very useful (), useful (), quite useful (), not useful (), I don't know ()

.....
.....

48. repeated listening to a tape-recorded word list:

How often do you use this strategy?

always (), often (), sometimes (), rarely (), never ()

extra comments:

.....
.....

How useful do you think this strategy is?

very useful (), useful (), quite useful (), not useful (), I don't know ()

49. repeated listening to other material:

How often do you use this strategy?

always (), often (), sometimes (), rarely (), never ()

extra comments:

.....

.....

How useful do you think this strategy is?

very useful (), useful (), quite useful (), not useful (), I don't know ()

.....

.....

50. taking vocabulary notes:

How often do you use this strategy?

always (), often (), sometimes (), rarely (), never ()

extra comments:

.....

.....

How useful do you think this strategy is?

very useful (), useful (), quite useful (), not useful (), I don't know ()

.....

.....

51. designing a word list:

How often do you use this strategy?

always (), often (), sometimes (), rarely (), never ()

extra comments:

.....

.....

How useful do you think this strategy is?

very useful (), useful (), quite useful (), not useful (), I don't know ()

.....

.....

52. designing flash cards:

How often do you use this strategy?

always (), often (), sometimes (), rarely (), never ()

extra comments:

.....

.....

How useful do you think this strategy is?

very useful (), useful (), quite useful (), not useful (), I don't know ()

.....

.....

53. using revision materials:

How often do you use this strategy?

always (), often (), sometimes (), rarely (), never ()

extra comments:

.....

.....

How useful do you think this strategy is?

very useful (), useful (), quite useful (), not useful (), I don't know ()

.....

.....

54. Do you use any other strategies that are not mentioned in this questionnaire?

PLEASE MAKE SURE THAT YOU HAVE ANSWERED ALL OF THE QUESTIONS.

Appendix Eleven

The reading texts of the TAP experiment

Text A:

* [With Court Nod, Parents Debate School Drug Tests

By TAMAR LEWIN

EW BUFFALO, Mich. — In this serene lakeside town, a group has gathered at the high school each week since August to try to hammer out a consensus on drug testing in the schools: a pastor, a basketball coach, a sheriff, a social worker, a superintendent and assorted parents, teachers, students and school board members.

They have debated whether a first offense should bring counseling or punishment and whether they can best deter drug use through education or testing. They have studied the merits of urine, hair and saliva tests. But week after weary week, they have adjourned without agreement.

"It cuts deep down to how one sees the world, and people have different views," said Michael Lindley, the superintendent. "Some say it's invasive and you're assuming my child is guilty until proved otherwise. Others say if kids have nothing to hide, it's not invasive. We don't have a huge drug problem here but we don't want to have our heads in the sand."] *

Until last spring, when the United States Supreme Court ruled, 5 to 4, that schools could conduct drug tests on students involved in extracurricular activities, the school board here had given the matter little thought. But now, here and in small towns across the nation, drug testing has become a hot issue. Rather than resolving the question, it seems, the court's decision has touched off a new round of passionate debate.

From Glen Cove, N.Y., to Lockney, Tex., hundreds of school boards are now considering whether — and how — to use drug tests. The proposals they are considering range from voluntary programs offering incentives like discount coupons for students who agree to be tested, to, in a few places, testing all students.

Before the Supreme Court's decision, about 5 percent of the nation's public school districts conducted drug tests of student athletes — a practice that the court upheld in 1995. But many districts decided the legal parameters of testing were so uncertain that they should await further guidance before adopting a plan.

Appendix Eleven, continued

The reading texts of the TAP experiment

Text B:



What are graded readers?

Graded readers are complete books, usually but not exclusively novels, that have been prepared so that they stay within a strictly limited vocabulary. They are typically divided into several levels.

Table 5.4. *The vocabulary levels in the Oxford Bookworms series*

Level	New words	Cumulative words
1	400	400
2	300	700
3	300	1,000
4	400	1,400
5	400	1,800
6	700	2,500

Here is the vocabulary grading scheme of the Oxford 'Bookworms' series.

There are six levels in the series. To read the books at level 1, a learner would need a vocabulary of around 400 words. Some of the titles available at this level are *White Death*, *Mutiny on the Bounty*, *The Phantom of the Opera*, and *One Way Ticket*. Level 2 adds another 300 words making a total of 700 words; all of the books at level 2 are within this vocabulary. Some topic words not in the vocabulary and proper nouns are also allowed. Some of the titles are simplifications and abridgements of well known works (*Sherlock Holmes Short Stories*, *Dracula*) while others are original pieces specially written for the series. This has prompted some to call graded readers 'language learner literature' (Day and Bamford, 1998). The Bookworms series includes fiction, a series for younger readers, and 'factfiles' non-fiction titles. *

Graded readers can fit into a course in many ways. They can be a means of vocabulary expansion; by reading them learners increase their vocabulary size. Because vocabulary is controlled, it is possible for elementary learners to read books where 95% of the vocabulary is already familiar. They can thus learn remaining words through guessing from context or dictionary use under conditions which do not place a heavy learning burden on them. They can be a means of establishing previously met vocabulary; learners can enrich their knowledge of known vocabulary and increase the fluency with which the vocabulary is retrieved. Nation and Wang (1999) concluded that the graded reading scheme that they studied was designed to reinforce and establish previously met vocabulary. This is probably the way most publishers regard graded readers and fits with West's (1955: 69) view of them as 'supplementary' readers, which provide reading practice, enrich known vocabulary and provide motivation to continue study through success in use.

Appendix Eleven, continued

The reading texts of the TAP experiment
Text C:

* **Road to Spirituality**

Now, we are in a position to briefly understand the road which Islam chalks out for the pursuit of spiritual development of man in the context of the mundane life in this world.

The first step in this direction is Iman (faith). It means that the idea which should hold supreme in the mind and heart of man is that God alone is his Master, Sovereign and Deity; seeking His Pleasure is the aim of all his endeavours; and His Commands alone constitute the law of his life. This should be his firm conviction, not merely cognition of the intellect, but also of the will. The stronger the deeper this conviction, the more profound faith will be, and it will enable man to tread the path of spiritual development with patience and steadfastness and face all the vicissitudes firmly and squarely.] *

The second stage is Ita'at (obedience) meaning that a man divests himself of his independence altogether, and accepts subservience to God in practice after having proclaimed faith in Him as his creed. The subservience is called Islam (obedience) in the language of the Qur'an. Thus, it means that man should not only acknowledge God as his Lord and Sovereign but should actually submit before Him and fashion his entire life in obedience to Lord.

Appendix Eleven, continued

The reading texts of the TAP experiment

Text D:

* Aluminium

Aluminium is the commonest metal in the Earth's crust, comprising 7.5 per cent of it. But it was not until the early part of this century that aluminium could be produced in large quantities. Now, it is one of the six most widely used metals in industry and technology. This is a measure of the useful properties that aluminium and its alloys possess.

Aluminium and its alloys are the least dense of all the important metals used for structural purposes. This property makes them particularly useful wherever weight is an important factor. The bodywork of trains, buses, trucks, boats, and especially aeroplanes is now frequently constructed of aluminium alloys. And even where lightness is not an essential factor, as in buildings, the attractive appearance of aluminium makes it a popular choice.

Another useful property of aluminium is its resistance to deep oxidation. Aluminium is high in the activity series, therefore, it reacts quite easily with water and oxygen. Once the outer surface has been converted to aluminium oxide, however, no more oxidation takes place. The thin outer layer of aluminium oxide sticks firmly to the metal, and protects it from further attack by water or oxygen. Because of this property, aluminium is very suitable for window frames and exterior doors. It is more expensive than wood to begin with, but the fact that it does not need to be painted regularly saves a great deal of money.] *

Aluminium conducts electricity only about two-thirds as well as copper, but its density is less than one-third that of copper. Aluminium wire is, therefore, a better conductor than copper on a weight-for-weight basis. In addition, its cost is about one-third that of copper wire. Almost the whole of the British overhead electricity distribution system uses aluminium wire, strengthened with a central core of steel. Aluminium also conducts heat well, and is used in the manufacture of cheap cooking pots and pans.

Pure aluminium is rather weak, but can be strengthened by alloying it with up to 10 per cent of elements such as copper, magnesium, and silicon. These are added in varying proportions. Some of these aluminium alloys, called duralumin alloys, possess the remarkable property of *age-hardening*: they get harder and stronger over a period of four or five days after they are made. This makes the alloy easy to work and shape immediately after manufacture and very strong in later use.

Appendix Eleven, continued

The reading texts of the TAP experiment

Text E:

Technical Translation

* [In so far as all texts can be categorized in terms of genre, there is no reason to give special attention to any one genre rather than any other. However, since most language students are not trained in science or technology, they are often in awe of 'technical' texts, and this chapter is devoted to problems confronting the translator of texts in this genre-category. By 'technical' translation, we mean translation of empirical/descriptive texts written in the context of scientific or technological disciplines. In fact, of course, any specialist field, from anthropology to zymurgy via banking, history, numismatics and yachting, has its own register, its own 'technical' jargon, its own genre-marking characteristics, with which translators have to be familiar if they are to produce a convincing TT in the appropriate field. In any case, the problems met in translating technical texts are to a great extent no different from those met in translating in any genre, specialized or not. A textual variable is a textual variable, a hyponym is a hyponym, whatever the genre and whatever the subject matter; and the relative merits of literal and communicative translation need to be considered in translating any text. Nevertheless, the very fact that technical texts are at the far extreme of unfamiliarity for most language students makes them especially clear illustrations of all these points. There are two reasons, then, for giving a chapter to technical translation: first, because it is often so unnerving for language students; and second, because it is so exemplary of issues crucial to translation methodology.] *

Appendix Twelve

Nation's (2001: 392) options for the assessment of vocabulary in a course

Options for the assessment of vocabulary in a course

Type of assessment	Aims of assessment	Available tests, test formats (length of the test)	How often and when administered	Content of the test
Diagnostic	<ul style="list-style-type: none"> To determine the appropriate vocabulary level to work on To place students in an appropriate group 	<ul style="list-style-type: none"> Vocabulary Levels Test (20–30 minutes) 	<ul style="list-style-type: none"> Once at the beginning of the course 	<ul style="list-style-type: none"> Vocabulary sampled from frequency levels
Short-term achievement	<ul style="list-style-type: none"> To monitor progress To motivate learners To guide changes to the course 	<ul style="list-style-type: none"> A wide variety of easily prepared formats testing a range of aspects of vocabulary knowledge (10 minutes) 	<ul style="list-style-type: none"> Every week or fortnight throughout the course 	<ul style="list-style-type: none"> Vocabulary chosen from course materials or by learners
Long-term achievement	<ul style="list-style-type: none"> To determine how well and how much vocabulary has been learned in the course To help plan the next course 	<ul style="list-style-type: none"> Multiple-choice Matching Yes/No (30–40 minutes) 	<ul style="list-style-type: none"> Twice: at the beginning and at the end 	<ul style="list-style-type: none"> Vocabulary chosen from course materials
Proficiency	<ul style="list-style-type: none"> To determine vocabulary size To place students in an appropriate group 	<ul style="list-style-type: none"> Eurocentres Vocabulary Size Test (30–40 minutes) 	<ul style="list-style-type: none"> Once (or twice): at the end (and beginning) 	<ul style="list-style-type: none"> Vocabulary sampled from a dictionary or a frequency count